THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND [SERIES.

VOL. XIII. ALBANY, N. Y., MARCH, 1865. No. 3.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N.Y.

TERMS—EIGHTY CENTS PER YEAR—Ten copies of THE CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Eight Dollars.

THE CULTIVATOR has been published thirty-one years. A NEW SERIES was commenced in 1853, and the twelve volumes for 1853, 4, 5, 6, 7, 8, 9, 60, 61, 62, 63 and 64, can be furnished bound and postpaid, at $1.25 each—the set of 12 vols. sent per express for $12.

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two volumes yearly of 416 pages, at $2.50 per year, is issued by the same publishers.

The Cultivator & Country Gentleman.

AUTUMN SURFACE MANURING.

Our old friend and correspondent, JOHN JOHNSTON, writes to express his pleasure at having seen several articles of late in the COUNTRY GENTLEMAN recommending the Surface Application of Manure in Autumn. "There has a great change come over you in the last ten years," he remarks, "since you added a note to one of my articles, saying you were surprised that a farmer like me should apply manure in this way. I wish you would republish my letter of some twenty years ago, advocating the application of manure in September or early in October, and plowing it in the next April or May. I commenced in 1838 to apply manure only at that season, and on the surface, but had experimented for several years previously to see if I could not destroy pigeon-weed by thus getting it to vegetate in autumn and then plowing it under in spring. I found that if the dung was spread by the 8th of October or thereabouts, it answered this purpose; but I found also *that my crops were much better* than when the dung was immediately plowed under. This was so contrary to what I was trained to in my youth, that I was for some years afraid to give publicity to the fact, until I had made it the subject of repeated trials."

Owing, perhaps, to some imperfection in the indexing of the earlier volumes of THE CULTIVATOR, we have been unable to find the letter to which Mr. JOHNSTON refers. Should we be successful hereafter, it shall again see the light, as he suggests. Meantime we are reminded in his note of the great modification which has undoubtedly taken place in the views of agricultural writers, as well as of practical farmers, within a few years past, both in this country and abroad, on the point referred to—a modification which the example and writings of our friend have had much influence in promoting.

In turning the pages of our back volumes in search of Mr. Johnston's letter, we chanced however to meet with a contribution on the same subject, from one of our ablest and most frequent correspondents in those days, Hon. JAS. M. GARNETT of Virginia. This article, although occupying a full quarto page in fine type, by some error, does not appear in the index, so that it could not be found on search any more readily than Mr. Johnston's. It was dated June 18th, 1839, and was published on page 104, vol. VI. Judge Garnett there exhibits the same hesitancy to which Mr. J. alludes, in coming forward with his experience in opposition to the teachings and practice of the whole community, until it had been most fully tested. As to his experiments, he says:

"I began penning my cattle late in the spring, and continued it until frost, in pens of the same size, moved at regular intervals of time, and containing the same number of cattle during the whole period. These pens were alternately plowed and left unplowed, until the following spring, when all were planted in corn, immediately followed by wheat. The superiority of both crops on all the pens which had remained unplowed for so many months after the cattle had manured them, was just as distinctly marked as if the dividing fences had continued standing; it was too plain even to admit of the slightest doubt. A near neighbor, a young farmer, had made the same experiment on a somewhat different soil, the year before, but with results precisely the same. Similar trials I myself have made and seen made by others with dry straw, alternately plowed in as soon as spread, and left on the surface until the next spring. In every case the last method proved best, as far as the following crop would prove it. The same experiment has been made by myself and others of my acquaintance, with manure from the horse stables and winter farm-pens, consisting of much unrotted corn offal; and without a solitary exception, either seen by me, or heard of, the surface application, after the corn was planted, produced most, manifestly, the best crop. Upon these numerous concurrent and undeniable facts, my opinion has been founded, that *it is best to apply manures on the surface of land.*"

He proceeds to argue at length whether the old theories should be adhered to, in spite of such facts, simply because so much ink has been shed in their defence. As to any injurious result from "evaporation," (or the "escape of ammonia" as it would probably have been styled at a later day,) he says: "All these results undeniably prove that the surface application was best, although the kinds of manure differed considerably." And farther on: "That such evaporation cannot thus act seems to me to be unquestionably proved; * * for, *if it did*, then the land of summer cow-pens plowed up as soon as removed, would, in every case, have produced better crops, than that of the unplowed, instead of *doing it in none.*"

The remainder of the article, in exposition of what he considered the true solution of the case, will bear at this day the test of close examination, and shows that he was both a careful observer and a deep and original thinker. Believing the fertilizing elements

of manures to be soluble in water, he shows that they may pass down into the soil as well from their own gravity, as from its possessing a greater attraction than does the atmosphere, for every substance in solution which constitutes the food of plants. If a loss of plant food is the result of evaporation, he says,—this is a process always going on, and why does it not impoverish the soil, "even without any cultivation whatever. Yet neither total nor partial barrenness is ever known to be produced by any other cause than incessant culture without manure." Even the gas escaping from exposed manures he thought to be utilized by the foliage of vegetable growth. Again, he continues, the rains dissolve and carry down the valuable elements of the manure, from the surface, to a proper depth for the use of the plant *roots*; while if we bury it below the surface, these soluble elements are washed, to a great degree, beyond the reach of the plants for whose nourishment they were designed. And he quaintly adds that his observation of Nature had not brought to his knowledge "a single exception to *her* practice of depositing on the earth's surface all the putrescent substances of every kind which appear designed to preserve her fecundity."

The whole subject is one of no little importance, and the reference to the volumes of our journal, of a quarter of a century ago, to which it has led us, may serve to show that it was as carefully studied then as now, and that these volumes contain not a few contributions which may be read with as much interest and profit, in the midst of all the investigations and "progress" of the present, as at the time they were originally written.

SUMMER FALLOWING.

I would like to inquire why it is that this ancient practice of raising winter grain has recently so fallen into disuse, and if it is not still correct that it is one of the speediest and most economical means of improving worn out-soils.

Take for instance a field in grass, either pasture or mowing, which for a series of years has been farmed under the rule of taking everything off and putting nothing on in return. It may give, perchance, an annual crop of half a ton per acre of very poor quantity of hay, composed in part perhaps of thistles, daisies, &c., the soil naturally feasible and with a good fair sward, but hide-bound and full of foul vegetation, and not yielding by any means what it ought to.

Now take this field and plow it *thoroughly* in the month of June, from six to eight inches deep, according to the character of the soil; allow it to remain through the warm season some six to eight weeks, and then have it well cross-plowed. By the way, it should in both instances, if practicable, be plowed in narrow "lands," so that the crossing may be as nearly as possible at right angles. At the period of sowing in September, it should be thoroughly and repeatedly harrowed with a Shares' harrow, which, by the way, acts very nearly the same as a light gang plow; or if at this time the sward be not well decomposed, another plowing must be had.

One thing, however, must be borne in mind, that the grain must not be put in until the sward has almost entirely disappeared, and most effectually intermixed with the soil. At the sowing of the grain the field should be seeded again with clover and timothy, as desired.

Now then it is plain that one need not commence this system until he makes up his mind fully to two things; first, that it will cause him to lose the use of his field mainly for one entire season; and secondly, that it will prove a course causing quite an outlay of labor, which is surely to be taken into account during the present war times. But we very much question whether there is any course or system by which a field in the low state supposed, can be more cheaply or sooner improved. And that it is improved no one will attempt to disprove. The entire vegetable matter in the field is thus quickly brought into a decomposed state, or manure, and made into good plant food.

The difference between this and the more usual rotation of corn, oats or barley, and seedling, or the three fold system of corn, spring grain, and then winter grain and seeding, being that in the case of fallowing, the soil is seeded down before the strength of of the sward has been exhausted by successive croppings.

WM. J. PETTEE. *Salisbury, Ct.*

The Profit and Unprofitableness of Fowls.

One of the most profitable and yet the most neglected stock kept by the New-England farmer is his stock of barnyard fowls, which neglect renders them the least remunerative; yet there are many exceptions to this statement, as many farmers are now learning that the right breed of fowls, properly managed, is as important to his interest as any stock he may keep. The success of the poulterer depends entirely upon his care in first selecting the right breed, and afterwards taking proper care of them. My most successful experience has been with the pure Brahma fowls, which breed with us is considered far superior in laying qualities, and for the market, to any we have ever known. I keep them but one year; that is, when my pullets commence laying in July or August, the old fowls are sold to the butcher, at which age our market dealers prefer them to younger fowls. My motive is to produce more eggs in the winter season from my young fowls than from the older ones. My sitting season is generally during the months of March and April. The young chickens are fed upon bran and boiled potatoes until one month old, afterwards with cracked corn, allowing them entire liberty. As soon as the young roosters are designated from the pullets they are separated, and fed differently; the roosters are fattened, while the pullets are fed to produce growth and maturity. The food for the pullets may be corn, pork-scraps, and barley; for the roosters, scalded corn meal—enclose them, being careful to furnish fresh water and grass, or green herbage. I generally set from 10 to 15 hens at once, as they all hatch at the same time. Two or three hens take charge of them in one coop, making the care much less than broods of different ages.

The coop for laying fowls should be light, dry, and well ventilated. It is not necessary that the Brahma fowls be kept warm in winter; they are very hardy, "and I find that they succeed better without artificial heat than with it," with particular care that the coop is free from drafts, being tight, with ventilation at the top.

In rearing chickens last season I discovered a method which I consider of much importance. When the chicks are about twelve hours old, a drop of kerosene oil is applied to the top of their heads, and under each wing, which immediately destroys any insect which may have come from the hen, and before they are troubled again they will be of sufficient size to take care of themselves by scratching in the soil or dust of the coop.

As a market fowl I think the Brahmas excel all others; their flesh is yellow, tender and juicy, even when one and two years old. I have experimented with nearly, if not all, the different known varieties, and find none to compare with the pure Brahma breed for every quality that constitutes a perfect profitable farm fowl.

Salem, Mass JOHN S. IVES.

Fruit Growers' Society of Western New-York.

The Winter Meeting of this Society was held at Rochester on the 24th inst. The attendance was large, most of the counties of Western New-York being represented by members in attendance.

President BARRY opened the meeting with a brief address, in which he alluded to the period of existence of the Society, this being the 10th annual meeting, and during this period three meetings had been held each year—summer, autumn and winter—he referred to the friendly and cordial feeling that had uniformly prevailed among the members during all this period, and to the social benefits which had thus arisen—and to the early discussions on the profits of fruit culture, at a time when the wheat crop had generally proved a partial failure—and to the wide publication of these discussions in the papers throughout the country. From this cause a great impetus had been given to fruit culture, and extensive orchards had been planted, and now Western New-York stood pre-eminent as a fruit-growing region.

The tables of the Society exhibited several fine collections of winter fruit. A superb collection of winter pears was presented by ELLWANGER & BARRY, consisting of *forty varieties*, each variety occupying a full dish. Among them we observed *Winter Nelis* and *Beurre Gris d'Hiver Nouveau*, measuring fully three inches in diameter each way, and *Belle Williams* three inches in diameter and nearly five inches in length. H. N. Langworthy exhibited a large box of Rebecca grapes in an excellent state of preservation, and fine Isabellas, and Catawbas were observed from other sources. The Tompkins County King were the most beautiful and showy apples in all the collections.

The committee on business reported the following questions for the consideration of the Society:

1st—The results of the most recent experience with the new varieties of the Grape?
2d—The best varieties of hardy Grapes to furnish a succession for family use; and how long may Grapes be had in perfection?
3d—What peculiarity of soil is adapted to the different varieties of the Grape?
4th—The best mode of keeping the Grape?
5th—The most recent experience with the new varieties of the Pear?
6th—The best varieties of Pears for general cultivation.
7th—Does our past experience justify the extensive planting of the Pear in Western New-York?
8th—What is the cause or causes of the failure of the Peach crop in Western New-York? And what is the best course to remedy the evil?
9th—Which is the most profitable of the Small Fruits to cultivate for market?
10th—What is the best method of growing and ripening fruits under glass?

The discussion was opened with remarks on the best mode of keeping grapes. Judge Larowe of Steuben county, had kept grapes till the middle of July as follows:—he uses crocks or jars holding about two gallons; laid a round board in the bottom, filled with grapes, and then sealed them air tight with a compound of rosin and tallow. They were placed in a cold room and allowed to remain there, unless the thermometer is likely to run down to zero, when they are carried to the cellar. It is important to have the grapes well ripened, in which case they will not freeze nearly so easily as apples. G. Ellwanger had never succeeded till he had kept his grapes in the barn, by first packing them in twelve and twenty-four pound boxes, and as soon as danger from frost occurs, placing them in very large boxes, encased all around with a stratum of dry leaves a foot thick—under, around and above them. Most agreed on the importance of packing them away in good, well ripened, (but not over ripe) condition, with the removal of all the imperfect berries. H. N. Langworthy had found the Rebecca to keep better when not too ripe or dead ripe. Dr. Sylvester had found three important requisites in keeping grapes, viz., perfect maturity, coolness of temperature, and as dry an air as possible. Judge Larowe was very emphatic in favor of perfect maturity for good keeping. He said the cheaper way was first to cure them, or evaporate the moisture, and then pack them away with alternating layers of straw, in boxes or shelves. They would thus keep till April. —— Olmsted of Genesee Co., kept them in drawers holding 25 pounds each, in a cool room, one box piled on another. He had found them thus to keep nearly as well as apples—they do not freeze so easily as apples. He said a neighbor has a cellar half above ground, where he keeps them in large quantity on racks, and now sends Isabellas to Buffalo, where they bring 90 cents per pound. He finds the Isabella, Diana and Rebecca to keep best.

New Varieties of the Grape.

Judge Larowe thought that the Diana, if it were only a better bearer, would be the most valuable of all grapes. The Delaware bore better, but was a poor keeper—he never could keep it *plump* more than four weeks; the Diana would keep as well as a winter apple. The Concord must be eaten at the very moment it is ripe—after that it becomes poorer. The Hartford Prolific he thought poor in quality, and only valuable for its earliness. These views appeared to be nearly those of other members. Remarks were made on the Iona and Adirondac, but none appeared prepared to give an opinion from actual experience. Rogers' Hybrids had been fruited by several, but they were not highly commended. President Barry doubted if any would be superior to the Concord. In reply to an inquiry, he said it was his opinion that the Rogers grapes were only seedlings of the Fox, and not hybrids. C. L. Hoag of Lockport, had fruited them for two years, and he thought very highly of some of them—while all are strong growers. Dr. Sylvester of Lyons, spoke highly of the Crevelling, which was agreed to by several others—the only objection being its loose bunches.

Best Varieties of Grapes for Succession.

A vote from the members was taken, consisting of 31 ballots, as follows:

Delaware, ...	30 votes.	Rebecca, ...	21 votes.
Diana, ...	26 do.	Concord, ...	14 do.
Isabella, ...	25 do.	Crevelling, ...	12 do.
Hartford Prolific, . .	23 do.	Catawba, ...	9 do.

Iona, Perkins, Allen's Hybrid, To Kalon, and Northern Muscadine, each 2 votes; and Lydia, Adirondac and Israella, each 1 vote.

Soil for the Grape.

G. Ellwanger said that Isabella and Catawba does best on heavy soil; but Delaware, Concord, Diana, and Rebecca, are best on light soil. Dr. Spence had a different experience—the best Isabellas growing on light soil and drift. Prest. Barry pointed out the importance of distinguishing relative terms in different localities—what is termed heavy in one place, would be light in another. E. Moody of Lockport, thought the best soil was a strong or clayey one, but with a *dry bottom*, or with good drainage. Other instances

were mentioned where the Isabella had grown and fruited to perfection on light soils, or composed of sand and gravel.

Discussion on Pears.

At the evening session G. Ellwanger read a valuable paper on the new varieties of the pear, as tested at the Mount Hope Nurseries. We hope on a future occasion to give our readers a copy of this paper.

Jones' Seedling was highly commended by H. E. Hooker, P. Barry and others, as a fine grower and bearer, and an excellent early winter variety, about the size of Winter Nelis. The *Church* had been cultivated and fruited for many years at Lyons and Rochester, under other names—some quite old trees are now in bearing. It has proved a valuable sort. G. Ellwanger stated that the *Beurre Gris d'Hiver Nouveau*, had proved the past season a fruit of great excellence, and the fruit had brought this winter no less than *twenty dollars* per bushel in New-York city. The *Edmonds*, a quite newly introduced sort by Ellwanger & Barry, was highly commended by the few present who had tasted it, as a variety of unsurpassed excellence, while it is a vigorous grower.

Failure of the Peach Crop.

E. Moody, of Lockport, was of the opinion that this failure is more frequent than formerly—and he attributes this to the clearing or cutting away of timber protection. He had observed that trees do best in sheltered places, and he had no doubt that belts or screens of evergreens would restore our peach crops. Dr. Sylvester thought that the increase in the cold of winters, from the freer sweep of winds, was the chief difficulty. On one winter night, observing the thermometer sinking far below zero, he went out with his men and built fires all through his orchard; and although the cold was 32° below zero, the crop was saved. His neighbors laughed at him for thus trying to "warm all out doors," yet they changed their manner when they saw him selling his fruit for three or four dollars per bushel. The influence of large bodies of open water, in softening the intensity of cold, and the security afforded by planting on elevated situations, was freely discussed, but without bringing out any points not already published, on this subject.

Pears for General Cultivation.

A ballot was taken on the best *four* summer, *eight* autumn, and *four* winter pears for general cultivation, for home and market use, in Western New-York. Only 16 votes were handed in, by the most prominent fruit-growers present, with the following results:

Summer Sorts—Giffard,	11	votes.
Tyson,	10	do.
Doyenne d'Ete and Rostiezer, each	9	do.
Osband's Summer,	8	do.
Brandywine and Bloodgood, each	2	do.
Dearborn's Seedling,	1	vote.
Autumn—Bartlett and Sheldon, each	16	votes.
Angouleme,	14	do.
Louise Bonne de Jersey,	13	do.
Anjou,	9	do.
Flemish Beauty, Diel, and Belle Lucrative, each	8	do.
Beurre Bosc,	4	do.
Howell,	3	do.
Washington, Buffum, Des Nonnes, Onondaga, Kingsessing, each	2	do.
Clairgeau, Church, Superfin, Dix, each	1	vote.
Winter—Lawrence,	15	votes.
Winter Nelis,	11	do.
Easter Beurre,	8	do.
Winkfield,	5	do.
Glout Morceau,	3	do.
Josephine de Malines, Columbia, Beurre Gris d'Hiver Nouveau, each	2	do.
Belle Williams, Aremberg, Duc d'Bordeaux, Beurre Bachelier, Alencon, Jaminette, and Jones' Seedling, each	1	vote.

Profitableness of Pear Culture.

Bronson of Geneva, stated that a neighbor sold his best 4 barrels of Seckels—brought 25 dollars per barrel—other sorts 16 to 23 dollars per barrel. Dr. Sylvester had received $154 from a fourth of an acre of trees, and had found no serious drawback. W. Sharp of Lockport, stated that several of his neighbors had set out pear orchards six years ago, and none had now received from them less than $500 per acre—some $700—and if every tree should now die, the investment would have been good. Others had lost largely by blight. Such orchards, set out years ago, had been neglected, and produced little. On the whole, the amount of this fruit yet raised for market, does not appear to be large, and prices are high.

Profitableness of Small Fruits.

The general voice was strongly in favor of the Strawberry for profit—some had done well with the Rochelle Blackberry, although in some places the winter had injured the stems. The Doolittle raspberry had proved profitable with those who had tried it for market, being quite hardy and easily cultivated.

The following officers were elected for the Society for the coming year:—

President—PATRICK BARRY, Rochester.
Vice-Presidents—C. L. Hoag, Lockport; G. H. Wheeler, Hammondsport; J. J. Thomas, Union Springs.
Secretary—James Vick, Rochester.
Treasurer—W. P. Townsend, Lockport.
Executive Committee—T. C. Maxwell, Geneva; G. Zimmerman, Buffalo; W. B. Smith, Syracuse; H. H. Olmstead, Pavilion; H. E. Hooker, Rochester.

HOW TO CURE HAMS.

Permit me to give you a recipe that will not only save a ham through the whole year, but will be fit to either boil or fry.

For such sized hams as can be cut from hogs weighing 250 lbs. average, I take 1 oz. saltpetre, 1 oz. saleratus, half-pint molasses, and a large handful fine salt, to each ham and shoulder. Mix all together in a tub or half-barrel. Then, with a small cloth, rub each piece and place in a cask. Do this twice each day for three weeks, and they are ready to smoke. For larger hams increase in proportion.

Smoking is another process requiring some care. Be careful not to smoke too much. Hams want to be dried as well as smoked. I would recommend a little smoke each day for two weeks, and then take down, roll in Union newspapers, put them in bags, and hang them in an upper room, and you can then have good hams the year round. This is much better than packing in brine, as they will always be too salt.

Jamestown, R. I. JOHN H. GARDINER.

TO MAKE GOOD CIDER.

The apples should be ripe and sound. Don't press the cheese until the cider runs clear. After filling the barrels, remove them immediately to a cool cellar—let them stand with the bung open until the sediment begins to go down; then close them, and pretty soon after give it the first racking. About three rackings will remove all the sediment. Bottle before the weather becomes warm enough for the trees to put out; fill the bottles one half inch from the corks; let them stand twenty-four hours after filling; then take a bowl of boiling water, dip the ends of cork to go in the bottle, in the water; hold the bottle in the left hand by the neck, and drive the cork in with a piece of fence lath. The bottles are then buried in the sand in the cellar.

By this process our best Jersey apples will make cider that has often been drank by epicures for Champaigne wine, and will not change for years, only seeming to get more body.

Let no water be used on the straw.

In packing away keep the corks up. J. B. *Newark.*

REMEDY FOR THE WIRE-WORM.

Having the pleasure, occasionally, of seeing the COUNTRY GENTLEMAN at my son-in-law's, Mr. Henry Wilson, who is one of your regular subscribers, I have just noticed under the head of "*Inquiries and Answers*," in your issue of 12th Jan., a short paragraph on the *wire-worm*, which so vividly recalls my mind to old and cherished associations that I cannot refrain from addressing you on the subject. Unfortunately I am obliged to write from memory; but you may perhaps be able to refer to the back numbers of the Journal of the Royal Agricultural Society of England for confirmation, and to the particular articles I am about to allude to. When our great drainage movement in England had, about 1847–8, attained the first stage of its realization, amongst other subordinate evils, it became a question whether it might not in some degree be a means of eradicating that standard pest, the wire-worm; and, in consequence, much discussion of the subject arose, and several other remedies were proposed and canvassed. I think about 1847 a paper on its natural history appeared in the Journal of the Royal, from that eminent entomologist Mr. Kirby, with some suggestions for its destruction, founded on its natural habits; but which, on trial, proved to be valueless. You may also remember that about this time, the subject of rape-cake, in lieu of linseed-cake, was much discussed; and from this, at my suggestion, and on the observation and experience of a namesake with whom I was then much associated, a remedy was proposed, which on extended trial always proved thoroughly effectual, and has, I believe, become a settled practice for the purpose. In his celebrated paper on the "Progress of English Agriculture," published, I think, in the Journal of the Royal Ag. Society of England in 1848, Mr. Pusey refers to this remedy, and says in substance that it is the only one to be depended upon. I think my paper on the subject was published in the Journal in 1847, and the Society (unsolicited and assuredly most unexpected by me,) sent me £10 for it.

The remedy was simply the application of 3 cwt. per acre of rape-cake, *broken into small lumps*, (not crushed into dust,) like half-inch bones, and spread on the land, and then plowed in before sowing the seed. The worms are so fond of it that they leave all other food for this, and on examining the lumps of cake some little time afterwards, they are found to contain the worms in all stages from repletion to death and decay. Besides being, as Mr. Pusey said of it, a "perfect vermifuge," the application is a fertilizer of great power, and its double capacity of course enhances its value. I received at the time a general acknowledgment for its introduction; but a little incident which occurred to me personally some time afterwards will show its practical value, and the estimation in which it was held. Returning by railway from inspecting, professionally, some drainage works, I got into a compartment with two other well to-do farmers, who soon began "to talk shop," and the wire-worm pest, from which one of them had suffered very severely, was their subject. The sufferer said he had two seasons before last a large crop of potatoes, which he valued at about £200; that not knowing what to do to prevent injury to the subsequent crops, he made it his special business to seek for some remedy from every farmer he met, but without finding one, until he accidentally was shown an extract from my paper in the "Mark-Lane Express," which struck him, as he said, to "appear so likely to answer" that he gave it a fair and extensive trial; and he again said, "I never saw another wire-worm, except what were either dead or dying in the lumps of cake;" and added he, much to the gratification of my vanity, "it has saved me a large sum of money, and if the farmers of England did their duty, they would make a very handsome present to the person who suggested it," to which, of course, I could but say, "amen!" Finding, however, so marked an example of success, I made myself known to him, and he then farther told me how he had become deeply interested in the experiment—as it was to him—and that finding from examination it seemed likely to be effectual, he simultaneously tested it in other ways, by collecting numbers of healthy worms from other land and putting them into boxes of soil with the lumps of cake in various quantities, and under varying circumstances, and invariably with the same result—the lumps all crowded with distended, dying and decaying worms. Many of your horticultural readers may perhaps know from experience, that *Pinks* are very subject to be cut off by the wire-worms. They will find the application of a few small lumps of rape cake placed round the roots of the plant, an inch or two under ground, a perfect preventive. It was from seeing this remedy so applied that its extended use was suggested.

I suppose the article of rape-cake is easily procurable with you; in England it is in common use, both as food for cattle and as a top-dressing for land.

Lennoxville, Cannda East. JOHN H. CHARNOCK.

THE BRAHMA FOWLS.

MESSRS. EDITORS—These fowls seem to give good satisfaction to all who have given them a trial, and from my own experience and the statements of others, I regard them as the best variety introduced among us.

They are remarkable layers, usually commencing as early as Christmas, and continuing with but slight interruption till moulting time in the fall; and not being much inclined to sit, they lose but little time from laying. They will not only lay more eggs in a year than any other variety, but lay when eggs are most desirable and bring the highest price—in the winter. They are exceeding hardy, grow quick, and for market are superior to all others, being large and plump, and their flesh light colored, tender and juicy, and unlike any other kind, retain the latter qualities when old. There is no difficulty in raising nearly all the chickens, as I have never known them to have the gapes or any other disease.

Their color is white, with a beautiful cream-colored tinge; wing and tail tipped with black, and the neck hackle of the same hue as the body, but finely penciled with black, giving them altogether a very fine appearance. They are very quiet and harmless in their disposition, and easily confined if desired.

I observe that they are highly recommended by the leading agricultural journals of England and America. J. S. Ives, Esq., of Salem, Mass., in a communication to the New-England Farmer, says—"After keeping upward of thirty different kinds, I have found none to compare with the Brahmas for every desirable purpose to the farmer, especially as winter layers." H. J. L.

Granville, N. Y.

FEED REQUIRED BY CATTLE.

NEAR GENEVA, 25th Jan., 1865.

MESSSS. EDITORS—I notice our friend L. BARTLETT'S article on wintering and fattening cattle, &c., in you issue of 19th inst. We have got many valuable articles from friend B., but I see he is not at home when he goes into the cattle business. In the first place, judicious cattle feeders will only buy such cattle as are at least fair beef, to start with, unless they can buy prime or extra fat cattle at about the same price per lb. as those that are only what may be called fair beef. Now if the latter is of good size, 1say from 100 to 1500 lbs.—the larger the better, if the breed is good—and he adds 200 lbs. to their live weight, he not only gets the pay for the 200 lbs., but in all probability, in the present state of the market, may get all of 4 cents per lb. on the 1100 or 1500 lbs. he bought, by making extra in place of only fair beef, when he got them. Good cattle could be bought here last October for 5½ cents—now they are selling at 9 and over. There have been very few seasons in 40 years, when cattle and sheep have paid so well for keep, so far, as they have done this year, even at the high price of hay and grain; and it is generally so; when feed is high, stock is brought lower, and fewer being fed, fat stock sell higher. I know of oxen that have paid over $70 each for less than two months' feeding, and a good part of that time on pumpkins, which are raised at little cost, and not saleable here, being a perishable article when the frost comes.

It is all nonsense to talk of those Hohenheim oxen eating 66 lbs. of hay daily. It must be *different* hay from any I ever saw, or a different kind of cattle, if they could eat the half of it—20 lbs. of hay will satisfy any cattle I ever fed, for a day. The way to make cattle pay for winter fattening, is to first have the best breed, and in good condition; if never fed meal before, feed quite light for two weeks; after that, increase as you see their appetites increase. Durhams and their grades are the best; Herefords are also excellent, but don't get to the weight of Durhams. Small cattle seldom or never pay one for winter fatting.

Those who have now sold, have got extra pay for the feed. How those who keep a month longer will do, time only can determine. I know sheep sold lately at $10 each, that would not have sold for $5.75 in the early part of November. Both sheep and cattle pay quite an item in the manure they make. Fatting stock make manure that tells where it goes.

JOHN JOHNSTON.

TICKS ON SHEEP.

MESSRS. EDS.—Your Canada correspondent gives his method of killing ticks on sheep. Five years ago I wintered 400 sheep. In the course of the winter they became very tickey. I procured an apparatus and seven pounds of tobacco, and commenced smoking, and thought we did it effectually. My son of 11 years and self could smoke 25 per day. In this way we went through the flock. At the end of twenty days, we examined the first, and found that but little advance had been made. We then applied sulphur, but did not succeed in fully destroying them. I have tried the Extract; it does very well if thoroughly done. But let me tell you the prettiest thing, and the surest: Take one part common unguentum and one part lard: mix thoroughly, and rub a small quantity on the bare spot under the fore legs. If very bad, a little on the dewlap from the brisket up to the throat.

I very much dislike tobacco, and cannot use it in the forms recommended without being sick, and to me any way to escape its use is a great favor.

The above may be no new thing, but as I never have seen it in print, I thought I would mention it.

McIndoes' Falls, Vt. S. GLEASON.

Rearing Calves on the Soiling Principle.

About the 1st of April last, I commenced raising ten heifer calves for the dairy—learned them to drink at three or four days old, and fed them the milk of five cows—two hundred weight corn meal, and what hay they would eat till 15th May. Milk and meal were then discontinued, and for the next two months they had about ten quarts sweet whey each per day, and what fresh grass (clover and orchard grass,) they would eat, fed three times a day—of which they consumed half an acre. The next sixty-three days they were fed the sowed corn that grew on half an acre, and the same allowance of whey as at first. About the 20th of Sept. they were turned into wheat stubble ground seeded to grass, last spring. When six months old, the heaviest one weighed 430 lbs., live weight, and the whole lot averaged *four hundred pounds each.*

The expense of cutting and feeding the grass and cornstalks, I think about the same as harvesting and threshing an acre of wheat.

The milk fed, if made into cheese, would have sold at,	$55.00
Two hundred weight corn meal at 16 s.,	4.00
Hay, estimated,	1.00
One acre land to wheat would have brought,	30.00
Value of whey, say,	10.00
Eight tons hay is a great plenty to winter them, worth	40.00
Total for one year,	$140.00

Equal to $14 per head for yearlings, which is about double the cost of "peace prices."

I have been engaged in dairying and stock-raising for the past twenty years, and have tried nearly all the different ways of feeding calves, and consider the experiment of the past season much the best. It produces *very superior animals*, and is no more expensive than the other plans. G. D. CURTIS.

Fon Du Lac Co., Wis.

Raising Grapevines from Eyes.

MESSRS. EDITORS—In all the books I have been able to procure upon the cultivation of the grapevine, it is laid down as an axiom that vines cannot be raised from single eyes without a good hot-bed and bottom heat. I think I have disproved this theory the present summer, so far at least as it relates to Concord vines. I raised a lot of very good ones in a cold-bed of rich earth, with no bottom heat, and that too, although snowy and cold weather set in after the buds began to swell. What is more striking, is the fact that I transplanted some of the eyes (as soon as they had three leaves,) into the open ground, where they remained through the dry summer, and made stout canes, three feet high, and each one had three or four roots, as large as a goose-quill, and from three to five feet long. Of course I do not mean to say that they were very desirable vines—for I should prefer plants with a compact bunch of fibrous roots, but I think the experiment shows that Concords can be raised without bottom heat. J. M. M. JR.

Walpole, Mass.

An Experiment in Feeding Two Hogs.

MESSSS. EDITORS—A neighbor of the writer has furnished for publication the following account of feeding two hogs. These hogs were bought Dec. 1, 1863, for $3 each, being seven weeks old. They were fed one quart of corn each per day, and the swill made in a small family, and the sour milk from two cows, after they calved in March, until the 1st of June. They were then turned into an orchard, and kept on grass, and the sour milk, &c., from the house, until the 2d of Sept. They were then taken from the orchard, and in addition to milk, &c., from the house, were fed fine middlings, (mill-feed,) of which on the 1st of October they had consumed 232 pounds, at a cost of two cents a pound. On the 1st of Oct. commenced feeding 10 bushels of peas, which cost $1.25 per bushel. These, with sour milk, &c., lasted until into November. They were then fed corn in the ear until they were killed, Jan. 6, 1865, when they had consumed 30 bushels of ears, which cost 50 cents a bushel. They were 15 months old when killed, The next day after they were killed they weighed, in market, 899 lbs., and sold for 16 cents a pound, bringing $143.84. This makes the account stand as follows:

DR.		
To cost of two pigs,		$6.00
Corn from Dec. 1 to June 4, 11 13-32 bush. at $1.12½,		12.82
232 lbs. mill-feed, two cents,		4.64
10 bushels peas, $1.25,		12.50
30 do. ears of corn, 50 cents,		15.00
Growth made by milk, &c., estimated at 300 lbs., at 16 cents,		48.00
		$98.96
CR.		
By 899 lbs. pork, at 16 cents,	$143.84	
25 lbs. lard, at 20 cents,	5.00	
		148.84
Which leaves a profit of		$49.88

Remarks.—The value of the milk, &c., from the house, is estimated much higher in the above account than is usually realized by farmers; but so is also the returns and profits realized on the other kinds of feed higher. Now there must be some reason for this, and as I do not understand there was anything particularly noteworthy in regard to the hogs, though undoubtedly they were good ones; the principal reason, without doubt, may be found in the manner of feeding. As hogs are usually kept, they are fed but little more than enough to support the life of the animal, leaving but a small portion of their feed to promote growth; consequently there are few farmers that realize more than 100 lbs. increase to the hog for these articles, or over 100 lbs. increase in pork for each cow kept on the farm; while with very many farmers, this increase, calculated either way, will fall a good deal short of 100 lbs. But in this case, instead of feeding but little more than enough to support life, they were fed enough to keep them growing right along to the best advantage. So that while but a small proportion of the feed went to support life, a large portion went to promote growth and to fatten the animals, thus giving a large profit on the feed. Consequently, what appeared to me at first as a large estimate for the increase given by the milk, &c., from the house, farther consideration makes appear as a rather moderate one, and as being more likely to be under than over the actual result. And it is the same in regard to each of the different kinds of feed. They were all fed out in a way to take the least proportion to support life, and give the greatest amount to produce an increase of growth and fatness; thus being a good example of the teaching of the Co. GENT., that the fattening of the hog should begin with the pig. Should this be the case, and all of the hogs fattened be made to gain nearly one pound a day, as was the case with these hogs, the same hogs would make the same amount of pork in a great deal less time—often in one-half, and generally very little if any over two-thirds the time that hogs are usually kept and fed.

For instance, it is very common for May or June pigs to be killed in December or January, when they are 18 to 20 months old, and then to average from 300 lbs. to 400 lbs. dressed. Now if these hogs had been made to gain about one pound a day, they would have reached the same weight in from ten to fourteen months; thus saving the cost of keeping them from six to ten months, which all know is no small item. Or if they had been made to gain about one pound a day, they would have averaged from 500 lbs. to 600 lbs. when killed; giving a great deal larger profit on their feed, and accounting for the difference in the profit on hogs as usually kept, and on those I have here given an account of.

At the first thought the price of the pork will appear higher in proportion to the price of grain, than is generally the case. But I find that this is not so—as taking pork at $5 a hundred, and corn and peas at 50 cts. a bushel, the per centage is nearly the same. While at the same time the prices paid for feed are such as plenty of the different kinds could have been bought for at the time; while the corn fed the first winter and spring was some 15 or 20 cts. higher than it sold for in that winter, the price being put at what he sold some for in the spring.

As the hogs were not weighed while they were feeding, there is no data by which to determine the actual or relative amount of increase, realized by feeding the different kinds of grain. But allowing 350 lbs. for the growth, produced by milk, &c., and for weight of pigs when purchased—it being kept in mind that I am all of this time considering dressed weight—then there will be about 550 lbs. increase to be credited to the grain and mill feed. Now, calling the corn 56 lbs. to the bushel, as probably it was not dry enough for market when fed, and the peas 60 lbs. to the bushel, those hogs were fed 2,310 lbs. including mill-feed; so if they gained 550 lbs. while consuming this amount, then it took 4 1-5th lbs. of feed to make one of dressed pork; while if they only gained 500 lbs., it took 4 3-5ths lbs. of grain to make one of pork. But, in either case, showing a very good gain for grain fed without grinding; and making the pork cost a little over eight cts. a lb. in the one case, and less than nine cts. a lb. in the other. F.

Orleans Co., N. Y., January, 1865.

Pennsylvania.—The annual election of the Pennsylvania State Agricultural Society took place at Harrisburg, on Tuesday, January 17th, resulting as follows:

President—A. BOYD HAMILTON, Dauphin county.

Vice-Presidents—One from each of 24 Congressional districts.

Additional Members of the Executive Committee—William Colder, Dauphin; J. R. Eby, Dauphin; B. G. Peters, Dauphin; John H. Ziegler, Dauphin; Peter Hurdick, Lycoming; Frederick Watts, Cumberland; James Gowen, Philadelphia; David Taggart, Northumberland; J. S. Haldeman, York; Thos. P. Knox, Montgomery.

Corresponding Secretary—J. Young, Dauphin.

EVERGREEN TREES.

MESSRS. EDS.—W. H. makes some inquiries in the last number of the COUNTRY GENTLEMAN, relating to the removal and culture of evergreens. My experience goes to show that such trees may be as safely and successfully removed as the most hardy deciduous trees, by observing proper care in the operation. Evergreens frequently spring up in old pastures, where the soil is cold, damp and thin, underlaid with a clay subsoil, so stiff that the roots cannot penetrate it; consequently no tap roots are formed, for circumstances utterly prevent it. Trees from such localities are easily taken up, as soon as the frost is out of the ground in the spring, with the roots very nearly entire, and the sparse soil in which they grew, adhering to them. By careful removal to the place of future growth, this soil is all retained, and instead of suffering from the removal, they at once commence growing faster and more healthily for the exchange, just as a valetudinarian often begins to improve on change of locality, and other favoring circumstances. In swamps, we have often found young evergreens growing in the mosses, living and decayed, which have accumulated over logs, thrown down by winds and allowed to remain. When found under such circumstances, the moss that sustains or gives them a foothold, is usually filled with fibres from the roots, while the roots themselves are very apt to stretch over the log into the soil below, in search of future food. Here, a sharp axe may safely be used to cut off the roots smooth and clean, where they enter the soil, and this done, the roots on the log, with the moss that sustains, can be raised from the log as entire as they were found, and in this condition, removed to their new locality. The growth of such evergreens soon becomes vigorous and healthy, and they are better by far for the removal. From such localities, they can be taken at almost any time, with perfect safety.

But, for the removal of large trees, from deeper and drier soils, I should give decided preference to the season when the buds were expanding into new stalk and new leaf, and would rather choose that, even an inch or two of new growth had been formed than to effect the removal a month before the vital energies of the tree commenced the work of spring. At this season of expanding bud and early growth, nature seems to have endowed evergreens with a wonderful power of taking care of themselves, so that unless this power is deprived them by the mutilating hand of man, there is little, if any, danger of transferring them from one locality to another. But mind this word, *mutilating*. I would not be responsible for the life of a tree, however small, or of whatever species or variety, for an hour after its removal, if the operation is performed in a clumsy, bungling, get through with it quick manner. Trees so managed may be expected to die to save themselves from the sufferings of future neglect and carelessness.

In the culture of evergreens, it is a mistake to suppose anything is gained in setting large trees. Where two are put out, one of them two or three feet high, and the other six feet, at the end of ten years the balance will be greatly in favor of those small at the setting. This is probably owing to the fact that a greater amount of root and fibre, in proportion to the size of the tree, is obtained with the small than with the large one; consequently it receives less check of growth in the effort to adopt itself to its new home. The roots of a tree are all important to its healthy growth, and the more of them and less they are mangled, the better.

To his inquiry, "when is the best time to prune pine trees?" I answer, if they, or any other kind of evergreens are set out for ornament, *never*. A great beauty in evergreens consists in the true and symmetrical form of their heads. Their branches, from the continued masses of verdure they cantain, spread more laterally than do those of deciduous trees, consequently a regular and fine head cannot be formed where the lower branches are taken off. The most beautiful trees of this class I ever saw, rested their lower branches of dense foliage, in a circle, on the ground, and with them for a base, and the trunks for masts, perfect cones of verdure, from twenty to thirty feet in height, were formed as true as the turners skill could have made them, and so dense that the rude winter winds could hardly find a place to send a "lull-a-by" through their branches. An evergreen left to nature, and retaining all its branches from the earth upward, is a natural beauty. One pruned of its lower branches, is an artificial deformity.

Pinching in the buds, retards the growth of the branches, and gives density to the foliage, and consequently increases the beauty of the tree. This may be done with safety, and oftentimes to advantage.

Richmond, Mass, Jan. 9, 1865. WILLIAM BACON.

SURFACE MANURING.

This subject has been somewhat discussed of late years, yet still there exists diversity of opinion concerning it. If I can aid in remedying any doubt in regard to its practicability, the object of this paper will have been attained. A leading, if not *the* leading objection to this practice, arises from the apprehension of the loss of the gases thereby sustained. There is plausibility and apparently much force in the objection. To the mind of the writer it was once one of the most cogent arguments against surface manuring. But experiments and observation have deprived the argument of its force. Although I may not be able to satisfy others on this subject, yet my own mind is convinced that grass land, not only, but land on which wheat is to be sown, is most immediately and permanently benefitted by applying manure on the surface. When thus applied to land on which wheat is to be sown, it should be thoroughly incorporated with the soil, by means of harrowing, that it may thus be protected from the effects of drought. But as to this escape of gas, I have noticed that many men are stumbled at it, who never seem troubled at all at the escape of gas from their manure heaps, which lie piled up in their yards from early spring till fall. What becomes of the gas which thus exudes, filling all the region for rods around with an odor hard to be endured? Is it likely that more gas would escape from these same manure heaps if they were judiciously applied to the land during the winter and spring months? Let us look at this matter from another point. In order to the decomposition of manure, three things are essential, viz., air, heat, and

moisture. Now, I have spoken of carrying manure on the land during the winter. It is supposed that this manure is the recent accumulation of the stables, made up of litter and the ordinary droppings of the stock. My proposal is, that instead of throwing it into piles to heat and consume itself, you scatter it over your land. My reasons for making this proposition are, in part, at least, as follows: If covered up with snow, it will be excluded from both air and heat sufficient to promote its decomposition. If there is no snow, the cold will prevent its decay, and none of its essential properties will, therefore, escape. But let spring come with its warm sun and genial showers, and the conditions of its decomposition are all fulfilled. It has now air, heat and moisture, and as its changes are going on, all its valuable properties are absorbed by earth or air, and the springing plants suck up its enriching qualities, and shoot up with unwonted vigor. Such is the theory, and such the facts which support it. Men may talk about the loss of gases when manures are applied to the surface, but I marvel if the loss is anything to be compared with that which is sustained by the ordinary barn-yard exposures. Let no one suppose, however, that surface manuring is to be indiscriminately practiced. Thrown on the surface of plowed fields, and there exposed for a long time to the scorching rays of a summer sun, it is doubtful whether your land will derive any benefits therefrom. So, if thrown on meadows parched with drought, and destitute of any aftermath to protect it from the heat of an autumnal sun, it may prove barren of any good results. But applied to meadows soon after mowing, or in the winter or early spring, or to plowed land, and thoroughly harrowed in, it is believed that the cases are rare, where visible fruits will not follow. S. W.

Oneida Co., N. Y.

PRODUCT OF SIX ACRES.

MESSRS. EDITORS—I see by the Germantown Telegraph, that Mr. John McGowen raised, on six acres, produce to the amount of $1,001.50, besides a large variety of vegetables and fruit for home use. I have done rather better than that, and will give you a statement of it. I am not in the habit of writing for publication, but as I have been greatly benefitted by reading the Co. GENT. for several years, I could certainly not object to give in return any ideas that I might have, if thought of any value to your readers.

But about the six acres. It was land on the "Silver Run marsh." I have 25 acres of the same kind. Seven years ago the farm was offered for sale—*marsh thrown in.* Five years ago I began to underdrain, and have been doing what I could at it ever since—the difficulty is to get fall enough for the drains. This depends on the main drain—an open ditch from 8 to 14 feet wide, which empties into the Delaware River. This drain belongs to the "Silver Run Marsh Co." and is two miles long from where I live. The few who desire to improve have had a constant warfare for several years, with those who don't believe in improvement, as is the case in all marsh companies that I know anything about. Well, we have at last got fall enough to have our underdrains from 18 inches to two feet deep. I have got sixteen acres done, and six acres—the first crop ever grown on it except weeds—produced last year as follows: 550 bushels potatoes, all sold that I had to sell at $1.50 per bushel—200 bushels corn, for which I am offered $1.65—1,000 heads of cabbage at 5c., $50—1,000 bundles blades, sold at 3c., $30—corn fodder worth $40—making in all $1,275, besides the family was furnished with a supply of tomatoes, cucumbers, egg plants, Lima and string beans, turnips, and about 500 cabbage too small to market. Also a lot of pumpkins. J. HIGGINS.

McDonough, Delaware.

ABOUT GRAPES.

Another year's experience with this new interest, confirms former experience, and much eagerness is manifested to obtain information about grapes. As to kinds, the Delaware still holds the ascendancy and I presume 50,000 of these will be put into vineyards this spring in this town. But many other kinds will be put out to some extent. Isabella is not ignored; but as the present vineyards are mostly of this kind, Concord, Catawba, Diana and Clinton will come in for a larger space than it.

The Catawba is quite healthy on our deep gravelly soils, and if, with improved care and culture we can give it a little longer season, it will hold a prominent place on this south-shore grape land. For the last six or seven years that I have grown Isabella and Catawba, the latter has been of more value than the former.

What we need is a good system of training and proper care in preparing the ground, and in its management after planting, manuring, &c.

Grapes have grown here, and very fair ones too, with very poor care, and some have flattered themselves that it is about as good as any way. When too late to retrieve the loss, it is feared we shall see the error. Nothing pays better for good care than the grape. I would that we could all take lessons from such men as John E. Mottier of Cincinnati, or Dr. Grant of Iona, and others of the same class. Grape-culture has quacks like all professions. Some men seem to learn it all after passing a few days or weeks where grapes are grown, and then fill the papers with their knowledge, which is worse than nothing. We want the best knowledge of our most experienced cultivators; and I was glad to see in your last No. a communication from Dr. Grant. We hope he will give us more. Let us have it from first hands.

Fredonia, N. Y., Jan. 20. A. S. MOSS.

GOOSE FARMING.

"Off with their heads! Away with the filthy things! They eat all before them and kill what follows after." Such are frequently the invectives from those of passing good sense, on most farm economies, but not entirely "sound on the goose."

Many an intelligent farmer will pay forty to sixty dollars for a bullock, to secure one hundred to one hundred and fifty pounds increase from summer grazing, who would hoot the idea of growing as much meat with less pasturage and the agency of an old goose, costing, perhaps, fifty cents. March goslings, with access to grass and a trough of water, will eat their way without much trouble up to six or eight pounds by Michaelmas.

Extra trouble in marketing is amply compensated for with pickings. D. *North Bend, Ohio.*

WASTING MANURES.

MESSRS. TUCKER—I have long read and admired your paper, and wherever I go I like to see it. Here in Iowa, I know there are some who cannot do without it, and I doubt not your circle of readers will increase as the State grows in agricultural wisdom.

I have been aware of the great errors which obtain here on the subject of manures, and of rotation of crops, but I hope a brighter day is dawning. New-England farmers have told me that their fathers did not economize fertilizers and apply them as is now done; and I have replied, that it was that very course which left to their sons so many worn-out farms, and so much greater necessity for economy and system.

Even the richest soil to be found in the rich West, contains but a limited supply of food for vegetation, and every crop takes somewhat from that store. Thus corn requires certain specific elements, and a repetition of that crop from year to year must take from the soil just those elements, and the yield per acre must inevitably decrease. This reasoning I conceive to be unquestionable; and yet on how many farms here do we see this exhaustive process going on year after year! Some judicious system of rotation might lengthen out the period of fertility, and that even would render the exhaustion only the more perfect in the end. The day will come when your correspondent "J. L. B." (Dec. 15, 1864,) and all others, will use their manures for other uses than "filling up holes" in the street.

I have seen a man here haul the manure from his stables out on to the ice of the river, that it might be carried down the stream. The farmers in the Mohawk Valley did this once when their "dung-bees" were in vogue, but I fancy you will not find any of them doing so now.

But even here, there are farmers more acute and far-sighted than your Springfield correspondent, quoted above, who are awake to the value of manure even on rich prairies. I had lately the pleasure of attending the annual meeting of the Agricultural Society of Iowa, and it gave me great pleasure to find the members an active, wide-awake set of farmers, enthusiastic in their calling. I found that among them the good old New-England principle of feeding the produce of the farm upon it was gaining ground, and I can guarantee that none of them will wish you to "discontinue sending them the COUNTRY GENTLEMAN because you write about manures."

But there are many other subjects which need discussion in the agricultural papers, and the Eastern press, from the length of experience in that region, and for other reasons, is best adapted to do it. An agricultural paper is printed here, but its columns contain little that is original, bearing upon its speciality, and so much with no relation to that subject as to alienate some of its friends. Long and frequent extracts from the COUNTRY GENTLEMAN are interesting, but why not subscribe direct and get the substance at first hands?

Before I close I wish to ask whether a discussion of the question of the desirability of "Special Farming" would not be interesting to your readers? This subject was before the Lee Farmers' Club a short time ago, and I notice that the Club at Haverhill was to discuss it also. Would not a compend of the latter discussion from Secretary Chase, be interesting to your readers? I know it would to one.

I agree with you that this is no time to discontinue Farmers' Clubs, but rather to engage in them with new zest. ARTHUR GILMAN *of Glynllyn.*

Des Moines, Iowa, Jan. 19, 1865.

POTATO-ONIONS.

"N. E. C." asks for information about these onions. I have grown them for fifteen years. A good garden soil in high condition, is essential to success. Fall plow if you can—work in the spring early. Keep a smooth level surface. Mark in rows 15 inches apart. In this mark I run a wheel hand-plow to deepen it; in this set your onions; if large, 4 to 6 inches apart, and less for the small, say 2 to 4 inches, just covering with earth, and placed so as to be nearly even with the surface. The seed grows in the centre of the large onions—no stalk, and the onions producing seed or sets are good as any. I have always used them mainly for green onions for market, and consequently could not tell the yield, but presume 300 to 400 bushels might be grown to the acre. I clear off what is left in July, and plant celery. A. S. MOSS.

Fredonia, N. Y.

EDS. CO. GENT.—I notice an inquiry for potato onion *seed.* The potato onion does not produce seed, but re-produces itself somewhat like the potato—hence the name. You set out a perfect onion in the spring, and as the top grows the bulb rots and sloughs off, leaving from five to ten small germs, from which the tops spring. These make small onions, the whole weighing but little if any more than the original onion. While in this stage of growth they make a very fine salad onion. Any number of these germs may be plucked from the roots for that purpose, and what remains will be all the better for it. These small onions are set out the second year, just as you would set out top onions, and produce the perfect onion. They grow to a fine size, and are very mild, crisp and tender, having very little of that pungent, tear-producing flavor of the common onion. They are so very mild, that persons fond of that root will eat them, with the addition of a little salt, just as they would a raw turnip or an apple. B. C. HOOD.

Campbellville, Ky.

P. S. The great quantity (about one-seventh of the crop,) required for seed, and the extra labor of setting out and cultivation, forbid the cultivation of this onion as a field crop, unless their superior excellence would command for them a much higher price than is obtained for the common onion.

Gum Shellac for Covering Wounds on Trees, Vines, &c.

Is it generally known that a little gum shellac dissolved in alcohol, applied to wounds on fruit trees, where large limbs have been cut off in pruning, or where the bark has been destroyed by mice or other causes, will effectually exclude the air and prevent decay? It will also immediately stop bleeding in grape-vines, where pruning is delayed until the sap starts. The liquid is easily applied, and may be kept for years ready for use, if kept tightly corked in a bottle.

Richmond, Ind. E. Y. T.

ONION CULTURE.

MESSRS. EDITORS—Having seen an inquiry by R. D. R., in the COUNTRY GENTLEMAN of Jan. 26, in relation to raising onions, and having had some experience in raising that vegetable, I will try to inform him.

The kind of Soil.—The soil I prefer is a good sandy loam.

Preparation.—If you have some very rotten manure free from weed seed, apply forty or fifty two-horse wagon loads to the acre. If you are not sure your manure is free, or nearly free from weed seeds, you had better not apply it, for there will always be an abundance of weeds at best. In place of manure use two hundred bushels of leached ashes to the acre, and plow six inches deep, and then drag and pulverize the ground well; then roll with a light roller to mash lumps, and drag again or rake to make light and fine on the surface. The past year I used a fine-toothed drag, that cut once in two and a half inches, behind the roller, so the ground was finished at one operation.

The kind of Seed and Quantity.—The kinds that I have raised most are the Yellow Danvers and Large Red, principally the latter. The amount of seed per acre will depend on the knowledge one has of its age. I prefer to sow as near three lbs. to the acre as possible, if I know the seed was raised the year previous; if not sure apply more. Last year the writer saw an acre of onions on which there was only three-fourths of a lb. of seed put, but the onions were not a third as thick as I generally leave them.

Sowing.—The time I recommend sowing onion seed is just as early as the ground can be properly fitted in the spring. In sowing it is best to drop a seed as often as one an inch, so as to have plenty come up. If the seed are sown by hand, they had better be mixed with sand or plaster, so that they can be sown without danger of getting too thick. I prefer a drill to sow with, because it sows evener than any person can possibly by hand. In regulating a drill to sow, it is best to try it on a floor, with a slide in the drill that you think about right; if it sows too thick—which you can readily see by counting the seed dropped—substitute the slide in the drill by placing one with a smaller hole, and so experiment till the right quantity is dropped. Cover the seed one-half inch in heavy loam soil, and three-fourths an inch or more in light soil, and roll it smooth. Sow the rows sixteen to eighteen inches apart, as that is near enough if they grow rank, and it is handier to weed when that distance, after the onions get large.

After Culture.—By all means start a hoe or some weed-cutter as soon as the onions are large enough to see the rows. Some recommend sowing radishes with the onions so to follow the rows more readily.

When the onions are up to four or six inches, thin to one inch if the ground is *very rich;* if medium, to two inches; if poor, to three or four inches. One inch may seem to make near neighbors, but the writer has practiced that plan on first-class soil, and found the onions to get plenty large enough. I have had them yield five bushels to the rod, for a number of rods in succession, but from two to three bushels is a good average. Any time after sowing seed, give as a top-dressing (before a rain if possible,) equal parts of plaster and hen manure, at the rate of four quarts to the square rod; and through the season another dressing, the same, or unleached ashes, at the rate of a peck to the square rod.

Charcoal is also an excellent dressing for onions, or if a person has plenty, it would be a good plan to powder it as fine as possible, and apply before plowing. Ever bear in mind to keep the weeds down.

I am aware that some onion-raisers recommend breaking down the tops when the bulb is nearly grown, thinking that it will bottom better. I have always considered that a "granny" notion, and let the tops fall naturally.

Harvesting.—When a majority of the tops are withered down, I take a potato hook and carefully pull the onions, let them lay on the ground till cured, then cut the tops off and market, if the market suits; if not, it is better to place them on a barn floor or some dry place.

Raising Seed.—In raising seed always pick out the largest or medium sized onions, as near the same shape as possible. When the time arrives for setting out, mark rows as wide as for corn, take a hoe and dig a trench three inches deep, and place the onions eight inches or more apart, and cover and press the ground well. A row of seed can be sown well enough between these wide rows, and will yield well. The object in placing the onions for seed so far apart, is that there may be plenty of room to keep out the weeds. I once planted some onions for seed with the rows not more than sixteen inches apart: the consequence was I could not get among them to weed; when large, up came the weeds and blasted the onion seed. When the seeds are black and begin to get hard, cut off the stalk six inches below the heads, and spread where they can dry; thresh out the seed, and clean as clean as possible with a fanning-mill; then place the seed in a pail of water and stir; the poor seed will arise, which skim off; then spread the seed that settled in the sun or near a stove to dry, and I will warrant that you will have better seed than can be bought of nine out of every ten seedsmen.

I would say to R. D. R., by all means keep onions out of your quack grass. HENRY PERCEY.

Newark, N. Y., Jan. 27, 1865.

A GOOD LOT OF PIGS.

EDS. CO. GENT.—I noticed in your paper of Jan. 5, an account of two pigs, 7½ months of age, that weighed 640 lbs. We have just dressed seven pigs, all of one litter, just 4 months and one week old, that weighed 789 lbs. nett—an average of 112 5-7th lbs. They were weaned at two months of age, and then slopped with house slops, cooked pumpkins, and shorts, until corn gathering, when they had the soft corn until two weeks before they were dressed, when they had sound corn on the cob. They have not had to exceed 20 bushels of corn atogether. It is not a brag operation, but we like to let our New England friends know that we are not asleep when we read the COUNTRY GENTLEMAN.

Richmond, Ind. CHARLES G. CARPENTER.

Sorghum for Soiling.—Can any of your readers who have practiced soiling, tell how sorghum answers for that purpose? Is it in any respect, either as to yield or milk producing qualities, so good as corn? F. R. *New-York.* [Any reader who may have tried sorghum for soiling, will oblige us by reporting the result.]

FARM BOOK-KEEPING.

While the importance of farm accounts is acknowledged by almost all, a very large proportion of farmers are deterred from entering upon any plan, from an apprehension of the difficulties of it, and from the notion that there must be some previous study of a system, to be qualified for it. These difficulties are rather magnified by the suggestions of some zealous advocates of an elaborate system, and perhaps by the notices which have been met, of the set of books prepared for the use of farmers who are disposed to keep accurate accounts.

The plain farmer is frightened at the thought of so much study and labor, and is disposed to leave that advanced step to the next generation, who shall be educated for it. Some who have made a beginning, and furnished themselves with books prepared to their hand, have, after a while, abandoned the work, discouraged by some difficulties, which come of their inexperience, and by some perplexities, which come of their undertaking too much at first.

Now accurate farm accounts may be kept in a manner so simple, and with so little time and labor, that the plainest farmer, with a common education, need not be deterred by any difficulties or perplexities. I know a farmer, who has always kept accounts of all his business, who is able to tell you the income and expenses of his farm, for every year for twenty-five years; the annual expenses of his family, the return per acre of each crop of the farm, for every year, and the value of each crop, the weight and value of all animals slaughtered on the farm, the sale of all animals sold from the farm, the cost of all purchased, the weight and value of all wool sold, and average weight and value of the fleeces, the cost of all buildings and other important improvements on the farm. Of course from all these facts collected, may be deduced the general profits of farming, the relative and positive value of different crops, the comparative importance of grain and grass, and many interesting and valuable principles.

Besides these things there are recorded changes of the seasons, the progress of vegetation, the time of planting and sowing, &c., the arrival of birds, and many other items of interest. And all the books necessary for these accounts you can hold in one hand. His plan is so simple, that it hardly comes up to the dignity of a system. It is needless to say that it is of practical interest to himself for very frequent reference.

Now every farmer is able, without much study, to do as much as this, and those whose taste and opportunity would induce them to adopt a higher style, will readily find out for themselves a more elaborate system, and will probably avail themselves of the help, afforded by the books prepared for such.

No young man should enter upon the management of a farm, without being prepared to keep an exact account of his business. It is essential to a just estimate of it. The difference between a record of the principal items of income and expense, and a complete record of all the items, will surprise those who have not tried it. And it is really easier to keep a complete record than to keep a partial one, and guess at the rest.

The recorded experience of a number of years, is a chart which enables the holder to keep clear of many damaging errors not only, but to push boldly out in a course which shall lead to certain success. N. Reed.

RAISING CORN FOR FODDER.

I think I have got an idea from your correspondent on cornstalks, "P., Darien, N. Y.," that will be worth a great deal to me. I have been trying to find some way to make more manure. I like the plan given in "Ten Acres Enough." Droves of Maryland cattle are going northward by here at all seasons of the year, and I think could be bought in the fall and sold in the spring in better condition; but the difficulty is to get the feed. No one here will sell cornstalks. "P." says one acre will feed 11 head 200 days, if raised as he suggests, and cut. I thought that over a good deal, and did not believe it could be done. But I have a Telegraph fodder cutter, and the other day while cutting some feed for horses, I thought I would buy a few sheaves of corn fodder and measure it. I found a fair sized sheave to make three bushels cut. I am feeding to all my of cattle one sheaf each at a feed. According to "P." I could feed three times as many if I cut it. But I have plenty of feed for all of the cattle I have at that rate, feeding it whole; but if I live to see another winter, I must certainly improve on that. I could raise on a few acres of the marsh, all the fodder that would be required to winter a "down county" drove, if treated as "P." advises—I could easily do it. I have a one-horse sweep power that would cut it fast enough with my Telegraph; the same power drives my corn-sheller, wood-saw and cider mill. But, as "P." says, let us have the subject "thoroughly ventilated this winter," for it is a very important one. Cutting so much fodder is a good deal of trouble, and feeding it cut more, and I want to know if it will pay. T. Higgins.

McDonough, Del.

ONION CULTURE.

In your number of Jan. 26th, R. D. R. wants to know the modus operandi of raising onions. Every onion raiser prefers his own way. A good soil is desirable to begin with. Plow in the fall, and manure well with well rotted manure from the hog-pen; if not enough of that, draw on the barn-yard. Plow deep and let it lie in the furrow till spring, and about the 15th or 20th of April, drag and plow again. Sow, broadcast, 20 or 25 bushels of ashes per acre, and pulverise well. When well pulverised, roll it down and make your rows fourteen inches apart. By using a seed drill, 4 lbs. of seed will sow an acre. I prefer soaking my seed in water, milk warm, 24 hours, before using it. It will come up quicker. Dry it with plaster or in the sun. I sprout my seed in the winter to know if it is good. In fact, all seeds I buy I try before planting.

As soon as the onions show themselves in the row, begin to use the hoe, and keep using it until the tops cover the ground. Keep them clean of weeds, and if too thick, thin them. If the land is rich they will bear to be thicker than on poor land.

After first and second hoeing, sow ashes or plaster broadcast, or drop it on the rows; it will retain the moisture, and facilitate their growth, and add to their size.

R. D. R. says he has got some quack grass on his lot; if so, I advise him to get rid of it before he puts onions on it, unless he wants to get rid of his finger nails, in weeding it out. $50 was the usual price paid for taking care of an acre before war times. Yield, from 600 to 1000 bushels per acre. Price here, from $1.75 to $2.50 per bushel. J. W.

West Springfield, Jan. 27, 1865

Shellac Varnish---Crude Petroleum for all Kinds of Vermin.

MESSRS. EDITORS—I noticed in your issue of Feb. 2, that shellac varnish was recommended as a styptic for the wounds of pruned trees and vines. The present high price of alcohol renders it desirable that a new and cheaper compound should be used: therefore, if a person will substitute Fusel oil from the distilleries as a solvent of the shellac, it will be found to act as well, and only cost a tenth of alcohol varnish.

Allow me also to correct an erroneous impression in regard to the use of petroleum to kill insects on trees and bushes, which has been so highly recommended. Petroleum, in a mercantile view, is the refined rock oil, and it not only kills insects, but is a dead shot also on plants. The crude oil should be used, and that should be of the thinnest kind. The heavy crude oil named "Mecca," is too thick for the purpose, and is as bad as coal tar, for if too freely used it prevents the foliage and branches getting their quantum of fresh air. The thin quality does not affect the plant, and kills all kind of vermin. Also, if used on animals that have the mange, it will cure them, and they will regain their health after a few applications. Refined oil, or its first product, Naptha, is a sure *cure* for bed-bugs and like small vermin. Two years ago I lost a number of hens from a disease that I could not find any description of in any book, nor after many inquiries from fowl fanciers could I learn of a remedy. They appeared to be all taken with a film coming over their left eye, refused to eat, moped, the right eye closed, and they died, covered with vermin. I tried many remedies and found all useless, until I tried crude petroleum, and though I have had many sicken, even in the winter time, since, I have not lost one. My method is to give each patient once a day a mouthful of oil, and apply it under their wings, and open the feathers in several places on the back, and pour on some of the oil. A few applications and the patient is discharged cured. The oil spreads all over the body, kills the parasites, and by their running among the other fowls causes some to adhere to them and keeps them healthy. I think it would be a good plan to freely sprinkle it in the fowl-houses, and thus free them from lice. Having cured several animals of mange or dry scurvy by using the crude oil, I opine that scabby sheep could be restored to health by a few doses of an ounce each, at the same time making use of it as a local outward application. As brevity is desirable in a journal like yours, I have condensed many letters into one, and if any service to you, your are welcome to publish them.

Buffalo, N. Y. ALEX. J. SHELDON, *Chemist.*

USE OF SALT FOR MOLES.

A subscriber tells that salt at the rate of a bushel per acre will drive off moles. Moles and earth-worms work in land here that is so saturated with salt that nothing will grow on it. Let me warn your readers against too free use of salt on trees. I have read as much as a peck recommended to a single tree. My experience is that that amount will kill large oaks and hickories, on clay land. Last winter and spring, the Horticultural *Prophets* told us, through every paper and magazine, that the peach orchards of the south-west were all destroyed by the great freeze of January 1st, 1864. Like modern prophets in general, they said too much, groaned too loud, for the orchards were not destroyed. Many old straggly, sickly trees were got rid of, but well cultivated, thrifty trees, were little injured. The fruit buds were all killed, and for the first time in eighteen years, we had no peaches. Will not some of your correspondents give a list of apples and other fruits suited to this latitude, 37°, in the west. Not a *theoretical* list, but one that has been tested. Rawle's Janet is the best winter apple grown here, but is classed second rate by nurserymen.

Gallatin Co., Ill. JOSEPH J. CASTLES.

NIGHT-SOIL---"LIQUIDS AND SOLIDS."

In the last number of the COUNTRY GENTLEMAN, E. M. of Geneva, inquires how to prepare night-soil for fertilization—"liquids and solids."

A full answer to this would be, "mix them." The true way is to have privies built without any vault beneath. The "seat plank" should be hung on hinges, and stout buckets placed as receptacles. Into these buckets the solid excrements fall, and into them too should all the chamber vessels of the family be emptied. By pursuing this plan, when the buckets are nearly full, about one-fourth will be "solid" and three-fourths "liquid," and giving forth little if any other smell than that of ammonia. When the bucket is lifted out the contents should be thoroughly stirred, and the whole becomes a rich liquid manure. *It is one of the very best fertilizers for fruit trees that can be applied.* It may be scattered on the surface of the soil around trees, or what is better, small conical heaps of barnyard manure, or road scrapings, or muck, may be made ready under the trees to receive this rich liquid addition. In this latitude I prefer making these conical heaps in the fall, and have the same saturated with the "liquid manure" two or three times during the fall and winter, and then in the spring level the heaps down by scattering it over the entire surface. Where varieties of apples are cultivated that incline to be great bearers, the orchard ought to be well manured as often as every second or third year. It is folly to expect large and continued returns from fruit trees *without they are fed.* I believe the use of this "liquid manure" has a great tendency to clear an orchard from insects.

Six Smith's Cider apple trees in my orchard, netted me last season sixty dollars. Most orchards in my neighborhood, and around Cincinnati, did poorly, but mine never did better. I attribute my success very much to the "feeding" which my trees got.

What an "uncivilized" procedure it is to dig vaults under privies, in which may be accumulated year after year this most offensive and health-destroying substance. It is the fruitful source of yellow and typhoid fevers, and in cities it so saturates the soil beneath us that the plague and pestilence must some day burst forth, demanding the just penalty for this criminal infraction of the laws of health. When properly applied the substance referred to is the richest and most welcome food for plants; but it is a virulent poison to all animal life. If our entire country would adopt the plan above suggested, during the next half century, as many lives would be saved, and as much increase would be given to our national wealth as would make up for the havoc on life and property which this great rebellion war has occasioned. B. F. S.

Latonia Springs, Ky., Feb. 7, 1865.

BEE-HOUSES AND BEE-HIVES.

In reply to the questions of Mr. F. Manter, *in the* Country Gentleman *of Jan. 5, p. 16.*

My experience for the last twenty years warrants me in saying that bee-houses, as a general thing, are worse than useless, making a good rendezvous for spiders, ants, mice, and moth millers, besides the great cost that is often bestowed upon them. In the summer they are too warm, and in the winter there is scarcely any warmth to them. To those who are in favor of bee-houses, and don't mind expense, I would suggest the following plan:

1st. Have it high enough to accommodate two shelves, say about seven or eight feet, by six feet in width, and as long as desired—have it composed of two walls and a dead air space between. It should be lathed and plastered, and made as tight as a good dwelling-house, with a double floor.

2d. It should face to the southeast, with a drop door six inches wide, made double, in range with each shelf, the whole length of the building.

3d. There should be a good cellar underneath, eight feet deep, with heavy stone and mortar walls, well pointed, with a floor that can be removed during winter; this will give the bees rather a uniform temperature when shut up tight.

Another great trouble with all bee-houses where the hives are packed in closely together on a shelf, is that the young queens, when they emerge from the hive the first time to pair with the drones on the wing, are very liable to enter the wrong hive on their return, and get destroyed. Other serious troubles are frequently encountered, in consequence of the hives being so near together. Should robber bees gain possession of one of the hives, the whole of them may suffer before it can be broke up. With foul-brood or moth millers, the same trouble would be experienced. If a hive is of double thickness, or composed of two walls, with a dead air space between (as it should be,) the shade of a tree would be preferable to any bee-house in the world, especially through the summer season.

The Best Bee-House for Winter, that I have ever seen, is a *dark dry* cellar. If the bees are put into it properly, they will come out nearly as strong in the spring as they were when first put in; there will be no loss of bees, only a few, say perhaps a gill, that will actually die of old age; the consumption of honey much less than in any other locality, and a low even temperature that is so much needed during their confinement.

The Proper Way to put Bees in the Cellar.—If in the old style, turn them bottom side up. If in the Langstroth or Kidder hive, only remove the cap and boxes. The heat of the swarm, (if a good one,) will drive all the dampness out of the hive, and the combs will remain just as white as they were in the fall. If the cellar does not freeze, the bees will not suffer with the cold; should the swarm be a small one, a newspaper spread lightly over the hive would be sufficient.

If the hives were placed in the cellar in the same position that they occupied out of doors, the consequence would be, the combs would become black and mouldy, and the confined breath of the bees would create a carbonic acid gas that would disease and destroy the bees by thousands.

Mr. M. states that a friend kept bees in a small *well-house* for twenty years, and they have done well, but did not swarm; but does not say whether there was any surplus honey taken from them or not.

I do not consider that my bees do well unless I receive from fifty to seventy-five pounds of surplus from each hive, besides young swarms; and if they should *not* swarm, much more than that. In northern Vermont in 1863, bees did extraordinarily well; many bee-keepers realized one hundred pounds and over of surplus honey per swarm; and in several instances where they kept the Italian bees, a still larger amount was realized. The season was a favorable one, and the hive used was an improved movable comb hive.

Disadvantages of Bees occupying a Room instead of a Hive.—1. They will seldom if ever swarm—2. It is very inconvenient taking surplus honey from it, should they perchance have it to spare—3. They will only increase about fast enough to keep up their numbers, caused by old age and accident—4. The bees after a time find it impossible to cover the combs, which will give the *ants, spiders*, mice and moth-millers a chance, which will generally end the scene in less than twenty years.

Feeding Bees Rye Meal or Water.—This process is governed somewhat by the style of hive. If bees are to be fed in the L. or K. hive, I would suggest that if the bees have had their flight one day, generally some day in March is the time to set them at liberty; immediately on setting them back into the cellar or room, the rye meal can be given them in a common tea saucer, with a bit of old comb by the side of it, to assist them in getting to it, or a small handful on a piece of comb, placed upon the top of the comb frames. *Water* can be given them in a similar way, with the cap and boxes still off, with a newspaper spread over the hive to prevent the bees from flying to the light, should there be one carried near them. Bees can be fed the same in the old style of hive if it is inverted.

Robbing of Bees—How prevented.—If the stock is a good one, and a small entrance given to the bees, say one half inch by one quarter inch, it is very seldom that bees will ever get robbed, especially if they have a fertile queen.

After a swarm of bees fairly get to robbing, it is not an easy task to prevent it, unless they are captured and imprisoned. They then can be destroyed, or kept imprisoned for nine days and made to serve us the same as other colonies, providing they are foreign bees. If our own bees get to robbing each other, then there is no other alternative but to scent the besieged hive with some essential oils, and contract the entrance to both hives.

K. P. Kidder, Practical Apiculturist.

Burlington, Vermont.

THE HOUSEWIFE'S HAND-BOOK—XXV.

BY A HOUSE-KEEPER.

Ice Cream.—A very cheap luxury and easily made. Take what quantity of cream (sweet and thick) you wish. Sweeten and flavor to your fancy. Have some broken ice and salt placed around your freezer in a keg or tub that comes up as high at least as the cream in the freezer. Turn the freezer until the cream is in a mushy mass; then with a long wooden paddle beat it until it rises up as light as the frothed white of an egg. A whip churn does not answer quite as well. When satisfied with its lightness, proceed to freeze it until stiff. Then mould it or wrap it up to keep it from thawing until wanted. If you have not pure cream, make a custard of fresh milk and whites of eggs, and use one-third with cream.

Cream seasoned and whipped to a froth, is nice with fresh fruit, or filled up in glasses in which there is a spoonful of jelly, or a maccaroon soaked in wine.

Custard.—Allow four eggs to each pint of fresh milk. Reserve part of the whites to froth and lay on top. Beat the eggs smooth, stir them in the milk—sweeten with best loaf-sugar. Set a bucket with the mixture in a pot of boiling water. Stir until done and remove from the fire instantly. The same mixture may be baked.

Apples or Quinces, pealed and cored, with the hole

made by coring filled with jelly or brown sugar, and baked with a little wine and sugar around, are very nice; with a custard poured over and baked, they are termed a bird's nest.

Blanc Mange.—Dissolve an ounce and a half of gelatine in a pint of sweet cream. Sweeten, flavor and boil it. Put a little in a cup on some ice and salt, and if it will mould, it is done. Color or use white.

Calf Foot Jelly.—Having reduced some feet to jelly by boiling, scrape off the fat from the cake when cold. Melt it in a kettle, and before it is warm enough to cook them, stir in the broken whites of some eggs. Boil and skim well; strain through a flannel bag; return to the kettle with the addition of some brandy, sugar and delicate spices, as much as makes it agreeable to you. Boil until it will readily congeal on ice; strain it through a flannel until perfectly clear; mould it, or if for glasses, heap it in them in broken pieces. You may flavor calf foot jelly with any fruit you choose. Gelatine is dissolved in water and prepared by the same process. One ounce to one quart of water in winter; one and a half ounces in summer.

Charlotte Russe.—Make one pint of rich custard, when cold stir in an ounce of isinglass dissolved in a half pint of water and reduced to a stiff jelly; sweeten with best sugar; mix a glass of wine, the juice of a couple of lemons, and a pint of frothed cream together; stir them into the custard when cool. Mould in blanc mange moulds, or cut out some nice shaped sponge cakes into shells, and pour the mixture in.

Coffee.—Pick, wash and drain the coffee; roast it of a nice brown color; when you can mash it with your fingers it is done. Many people stir in an ounce of butter to a pound of coffee. It is best fresh roasted, but as that is too troublesome in real business families, it is usually prepared once a week, and immediately put in close canisters. One pound of coffee to a gallon of water is the prescribed quantity, but we think used by few. Mix the ground coffee with the white of an egg; when the water boils stir it in and boil hard for a few minutes; then set it where it will boil slowly for ten minutes. Coffee should be made just before wanted for use. Before pouring it into the urn, pour a cupful back and forth, until it seems clear. You may use a strip of ising-glass instead of the white of an egg, or you may, when you want the coffee, after it cools, glaze it, using the whites of two eggs to each pound of coffee.

Tea.—Use a China tea-pot; scald it well. Allow two cups of tea to a person at least, a teaspoonful of tea to each person. Twenty minutes before tea is wanted, pour on a little boiling water. When ready to be sent to the table, fill up with boiling water. Few nerves can stand tea as strong as a heaping spoonful of first rate tea would make a cup. Find out how strong your family like it, and make it accordingly.

Chocolate.—Scrape up one pound of best chocolate and dissolve it in a teacupful of boiling water; then mix with six teacupfuls of fresh milk; let it come to a boil. It is then ready for the table.

If you will add eight well beaten eggs to the above preparation, with sugar, and bake it in cups, you will have a nice chocolate pudding.

AYRSHIRE COWS AS MILKERS.

In the Transactions for 1864, of the Essex, Massachusetts, Agricultural Society—one of the oldest and most useful bodies of the kind in the country—we find a valuable statement, which is condensed below, for the COUNTRY GENTLEMAN. The Reports of the Committees of this Society are always full and interesting, and often include much information from the direct experience of their authors—in this respect affording an example worthy of imitation. Thus Mr. JOS. S. HOWE, chairman of the Committee on the Dairy, takes occasion in his report to comment upon the lack of general information, as to what constitutes a good or tolerable annual yield of milk from milch cows, and then proceeds incidentally to relate the result of a trial conducted by himself a year or two ago. Its object was "to ascertain how much an average cow would give, on fair keeping, and how much difference there was between such a cow and the best." Three cows were therefore selected, which had been kept upon the place several seasons, and whose qualities were known to be such as to throw some light upon the point specified:

No. 1 was a cow that had always been considered a FAIR milker—a "native"—calved April 12th, and again the 22d of the next March.

No. 2 was also a "native," but was one of the BEST—calved April 25th, and again the 19th of the next April.

No. 3 was a *grade* AYRSHIRE—calved June 10th, and the 21st of the next June.

The milk was measured carefully every Wednesday, and the amount reckoned an average for the week—with the following results:

Yield of Milk in Quarts of the Three Cows for One Year.

	Amount for the Month.			Amount per Day.		
	No. 1.	No. 2.	No. 3.	No. 1.	No. 2.	No. 3.
April,	171	47	....	9	9⅓	....
May,	314	345	....	10⅛	11⅛	....
June,	308	406	345	19¾	13⅓	18
July,	290	320	427	9⅓	10⅓	13 4-5
August,	273	305	395	8 5-6	9 5-6	12 5-6
September,	231	298	334	7⅗	10	11 1-6
October,	194	279	357	6¼	9	11½
November,	171	259	296	5⅗	8⅗	9⅞
December,	104	247	310	3⅓	8	10
January,	46	250	326	2	8	10½
February,	....	190	295	....	6 5-6	10½
March,	....	54	270	....	3	8⅝
April,	....	...	169	....	....	5⅝
May,	..	....	41	..	....	3

No. 1. Total yield of Milk, 2,102 quarts—sold for $52.47
2. do. do. 3,000 do. do. 79.71
3. do. do. 5,265 do. do. 97.57

Av. amount per day during whole time—No. 1, 6.2 quarts.
do. do. 2, 8.5 do.
do. do. 3, 9.4 do.

Mr. HOWE adds: "The keeping in each case was precisely alike, and consisted of a few roots or shorts, with as much hay and other fodder as they would eat;—during the summer months, nothing but good pasture. It was thought at the time that No. 1 barely paid the cost of keeping and a fair interest on her market value. Taking this for granted, then No. 3 paid a profit over cost of keeping sufficient to buy a good cow at that time.

"Dr. Loomis, in a paper published in the Patent Office Report of 1861, estimates the average annual amount of milk produced over a large extent of territory, at only 1,800 quarts per cow. If this is correct, or even if 2,100 quarts per year be the average, then it follows that many farmers are making milk at little or no profit. It also follows that, with better stock, the same expense in keeping will yield a larger return than in almost any other branch of agriculture. Doubtless it is practically impossible for all to obtain extra cows; but when farmers are convinced that they cannot afford to keep a medium cow, the demand for better stock will increase, and the supply will increase with the demand."

"Confusion to the man," as the carpenter said, "who first invented working by candle-light." "Ay, or by daylight either," rejoined his apprentice.

The New-York State Agricultural Society.

Winter Meeting at Albany.

The Society met at the Assembly Chamber at noon February 8th, the President, JAMES O. SHELDON, Esq., of Ontario, in the chair. The first business in order was the reading of the Treasurer's Report, of which the following is an abstract:

Report of LUTHER H. TUCKER, *Treasurer of the New-York State Agricultural Society.*

RECEIPTS.

Balance on hand from last account,	$3,871.25
Annual memberships received,	111.00
Life memberships,	378.00
State appropriation,	875.00
State appropriation for salary Dr. Fitch, Entomologist of Society,	1,000.00
Sale of Society's tent,	375.00
Rochester local subscription	1,200.00
Rochester State Fair Receipts,	15,487.94
Premium Deposit Fund, presented by Hon. E. Cornell	150.00
Interest on Flax Fund Deposit,	109.22
Interest on Society's investments,	253.21
Total,	$23,810.62

PAYMENTS.

Premiums, &c., annual meeting,	$366.00
Premiums, &c., on account previous years,	736.41
Library and Museum expenses,	548.31
Salaries and travelling expenses, including Dr. Fitch, Entomologist,	5,164.43
Incidental expenses,	265.62
Postage account,	274.21
Printing and stationery,	656.09
Expenses on Flax Fund account,	43.45
Premiums Rochester State Fair,	3,639.59
Expenses Rochester State Fair,	4,574.53
Total payments,	$16,268.50
United States Securities on hand,	6,936.21
Premium Deposit Fund,	150.00
Cash on hand,	455.78
Total,	$23,810.62
Total cash and securities as above stated,	$7,541.93

To which was appended the usual certificate of the Committee of Audit, and on motion of Hon. A. B. CONGER the Report as read was accepted and approved.

The Annual Report of the Executive Committee was next read by the Corresponding Secretary, Col. B. P. JOHNSON. After reviewing the encouraging features in the agricultural history of the past year,—the growing demand for improved implements and machinery is referred to. The extension of interest in wool-growing has resulted in the organization of a Society of the Sheep-breeders of the State. Our Dairy interests have been unprecedentedly prosperous. The Flax Committee of the Society report that while there has been no invention or discovery as yet brought forward worthy of the award of the Legislative appropriation now in the Society's hands, there have been marked improvements effected, which indicate a much nearer approach to the object in view than heretofore attained. Owing to delay in printing the Society's Transactions, copies have not been supplied as promised to those engaged in collecting Agricultural Statistics, and the law requires revision. The holding of a Trial of Implements during the coming year is recommended, and its importance set forth. The loss which the Society, in common with the farmers of the State, has had to deplore during the past year, in the death of two of its former Presidents, is referred to in fitting terms. Returns from County and Town Associations have been generally of a favorable and encouraging character. Such associations as that of the cheese-makers of the State are doing much good. The Steam plow imported at too late a season to be put into operation last autumn, will probably be tested at the West the coming Spring. The Agricultural discussions at the last State Fair excited the usual interest; subjects should hereafter be selected and published at an earlier day, and farmers induced, if possible, to take part still more freely in their discussion. The agricultural surveys of counties should be continued as may be expedient. The liberal offer of Hon. E. CORNELL to endow an Agricultural College at Ithaca with $300,000, provided the State would appropriate to the same object one-half the income hereafter arising from the National land grant, has now been increased to the munificent tender of *Half a Million Dollars*, should the Legislature conclude to devote the whole income of the land grant to this purpose—a donation which may be accepted, it is sincerely hoped, and at length bring about the result so long and so anxiously sought—the establishment of an Institution, creditable to the State, upon a basis securing its permanent prosperity and usefulness. Improvements have been effected during the past year in the Society's Library, Museum and Lecture Room, adding much to their convenience. There is reason to think that a Winter Exhibition of Fat Stock may hereafter be successfully established—the yards and buildings at West Albany being easily adaptable for the purpose and accessible to visitors. The progress of our Horticulture has continued, and the cultivation of the Grape is rapidly growing in importance in several parts of the State. The Treasurer's Report shows a satisfactory condition of the Finances of the Society.

Mr. T. S. FAXTON, of Utica, moved the acceptance and approval of the Report, after which the usual nominating committee was appointed, on motion of Mr. Conger, consisting of three members from each Judicial District. After retiring for consultation this committee presented the following nominations:

President—Hon. T. C. PETERS, Genesee.

Vice-Presidents—1. Thos. H. Faile, Jr., New-York; 2. Samuel Thorne, Dutchess; 3. J. Stanton Gould, Columbia; 4. T. L. Harison, St. Lawrence; 5. John Butterfield, Oneida; 6. William Ely, Broome; 7. D. D. T. Moore, Monroe; 8. Horace S. Huntley, Cattaraugus.

Corresponding Secretary—Benjamin P. Johnson, Albany.

Recording Secretary—Erastus Corning, Jr., Albany.

Treasurer—Luther H. Tucker, Albany.

Executive Committee—Elon Comstock, New-York; George H. Brown, Dutchess; Clark I. Hayes, Otsego; H. T. E. Foster, Seneca; Levi Blakeslee, Oneida.

The Committee also recommended to the Board, the selection of the City of UTICA as the place for holding the next Annual Fair. The Report was accepted, and the officers named, on ballot duly elected.

After a recess, the Society convened at 7 P. M. Dr. Asa Fitch delivered an interesting lecture upon his Entomological investigations since the last Winter Meeting. On the invitation of the President, Dr. J. A. WARDER of Ohio, a member of the U. S. Commission on Flax Cotton, made some interesting and instructive remarks upon this important subject, and was followed by J. STANTON GOULD of Hudson, in continuation of the same question. Votes of thanks were passed to the several speakers. Mr. GEDDES, of Onondaga, briefly and appropriately reviewed the life and agricultural services of the late WM. FULLER of that County, a former Vice-President. A committee was appointed to inspect a new Beater Hay Press in operation.

The Exhibition at the Society's Rooms.

The following is a list of the premiums awarded:

FIELD CROPS.

Best crop of oats, Miss Amanda Newton, East Bloomfield, Ontario county. 10⅛ acres, crop 695 bushels.

Value of crop $556 00
Cost of cultivation 108 00
$448 00

Value of crop per acre, $55.57.

Steuben County Ag. Society, for taking Ag. Statistics in 1864 .... 30 00

ESSAY.

History of Grape Culture in Steuben county, Hon. G. Denniston, Prattsburgh, Steuben Co 25 00

GRAINS AND SEEDS.

One bushel of each variety exhibited.

Winter wheat—1st Prem., Ai Pine, Pittstown; white, 63 lbs 3 00
Rye—1st Premium, Jos. Cary, Albany, 57 lbs 3 00
2d Premium, Ai Pine, 57 lbs 2 00
Spring barley—1st Prem., H. Wier, Johnsonville, 46 lbs. 3 00
Scotch oats—1st Premium, H. Wier, 40 lbs 3 00
Yellow corn—1st Premium, Ai Pine, 60 lbs 3 00
2nd do., D. W. C. DeForest, De Friestville, 56 lbs 2 00
White corn—1st Premium, H. Weir, 59 lbs 3 00
Beans—1st Premium, L. L. French, Page's Corners, Herkimer County, 63 lbs 3 00
2d do., Ai Pine, Marrowfat 2 00
Flax seed—1st Premium, Ai Pine, 52 lbs 3 00
2d do., H Weir, 55 lbs 2 00
Buckwheat—1st Premium, H. Wier, 48 lbs 3 00
2nd do., Ai Pine, 48 lbs 2 00
Millet seed—To H. Wier, a discretionary premium for half bushel .... Trans.
D. W. Bulkely, Williamstown, Mass., Belgian potatoes. Trans.
D. S. Heffron, Utica, three varieties seedling potatoes. Trans.

SAMUEL CARY,
OSCAR GRANGER, Committee.

BUTTER.

1st Premium, three tubs made at any time, L. L. French, Page's Corners, Herkimer County 15 00
1st Premium, three tubs made in June, Aug. and Nov., L. L. French 15 00
2nd do., Mrs. H. Weir, Johnsonville, Rens 10 00
3d do., Ai Pine, Pittstown .... Trans.
1st Premium, winter butter, Mrs. H. Weir 5 00

CHEESE.

1st Premium, three cheese, E. F. Carter, Evansville, Jefferson County 15 00

The cheese exhibited by Mr. Carter were of excellent quality, good flavor and uniform character, and are well deserving the premium.

Discretionary—The three cheese exhibited by Messrs. Cary & Sons, manufactured by S. Thompson, South Otselic, were very superior, rich in color, and pure flavor. Your Committee would recommend a discretionary premium .... Diploma.

H. T. E. FOSTER,
GEORGE H. BROWN,
ISAAC H. COCKS.

FRUIT.

Apples—Best 20 varieties, Wm. H. Slingerland, Normanskill, Albany County 4 00
Best 15 do., Wm. H. Rogers, Pultneyville, Wayne County 3 00
Best 30 do., Wm. H. Rogers 4 00
Best dish, Newtown pippin, Mrs. H. Weir .... S. S. Med.

Discretionary—Mr. John Harold, of Hempstead, Queens County, exhibited a variety of wine made from the pure juice of the Norton Virginia Seedling Grape, which the Committee consider a delicious wine and free from that disagreeable acid which most native wines have. The Committee award Tucker's Rural Affairs.

D. A. Bulkely, of Williamstown, Mass., exhibited a pleasant Blackberry cordial. Committee award .... Trans.

HERMAN WENDELL,
ASA FITCH,
D. R. FLOYD JONES.

Discretionary.—Domestic Manufactures.—Mrs. Henry Weir, of Johnsonville, Rens. Co., exhibited a great variety of Domestic Manufactures made by herself, nearly all during the past year, consisting of plain and embroidered bed spreads and blankets, patch work quilts, flannels, ginghams, rag carpets, drilling, linens, &c., amounting to twenty-two articles, highly creditable to the lady;

For which the Executive Committee award a special premium of $25 00

Mrs. Weir also exhibited 6 beautiful Bouquets of Everlasting Flowers of a variety of brilliant colors. Committee award Tucker's Rural Affairs.

Dennis Grogan, of Albany, exhibited samples of Upland Cotton grown in this city .... Trans.

The Seed-Planter exhibited by Irish & Ensign is to be made by R. & M. Harder, the well-known Threshing Machine manufacturers, Cobleskill. On examination, this machine struck us very favorably from its simplicity and the apparent perfection with which it promises to do its work. Its construction embraces several points of originality in such implements, and the certificates shown from those who have had it in use are strongly in its favor. The Sleigh-Brake shown by Jas. Thompson, Ballston Spa, must be an effective and most important attachment for winter use in a hilly region.

With quite a number of the officers and members of the Society, we attended on Thursday afternoon a trial in operation of the new Beater Hay-press made by Messrs. L. & P. K. Dederick of this city. It has not been sufficiently tested as yet to perfect all the various parts of the machinery, and it was tried by hands inexperienced in such work. While it seemed evident that some of its parts require strengthening, the work done proved its capacity to meet the end designed, and at a large saving, as compared with the Beater press heretofore exhibited, in the actual expenditure of power required. It is worked by one horse instead of two, with a sweep power of only ten feet radius, and only requires seven revolutions to compress the bale—the toggle-joint apparatus effecting this end, being of immense power. The report of the committee having the trial in charge was of a very favorable nature.

Discussions.

During the day a meeting was held at the Society's Lecture-room, at which one of the topics discussed at Rochester during the Fair was brought up for farther consideration, viz., "Is it more profitable for dairymen to keep up their stock by raising than by purchasing their cows?"

Several gentlemen participated in the debate, among whom were Col. S. D. Harris, editor of the Ohio Farmer, Hon. George Geddes of Onondaga, Hon. T. C. Peters of Genesee, Mr. Collins of Otsego, Mr. Lewis of Herkimer, Mr. Norris of Genesee, Solon Robinson of New-York. The Chairman also made some remarks, when the following resolution, offered by Mr. Geddes, was unanimously adopted by the meeting:

Resolved, That it is expedient and profitable for Dairymen of the State of New-York, to preserve the policy, as far as possible, of obtaining new herds by rearing their own stock.

Resolved, That heifers should be allowed to calve at two years of age.

Evening Meeting.

On the meeting of the Society in the evening, and after reading the reports of committees, embracing the awards above given, the address of the retiring President, JAS. O. SHELDON, Esq., was delivered—in which, in a most appropriate manner, the various topics of interest in the Society's history during the year were adverted to, concluding, among other points, with some very practical suggestions, urging the extension of root culture upon the notice of our farmers, and glancing at the changes which seem not unlikely to be brought about in our agriculture from the extended market for the hay crop, both for city use and for export, opened by the invention of the Beater presses—rendering this crop as compact and cheap for transportation to long distances as any other product of the soil. Mr. SHELDON'S remarks will shortly appear in pamphlet form, when we shall hope to present some extracts to our readers; they were listened to with much interest, and concluded by the introduction of

The President elect, Hon. Theodore C. Peters, of Genesee county, who, in a few brief and happy remarks, thanked the Society for the honor conferred upon him, and promised them his best efforts for the success of the Society in the coming year.

Lay your hand upon your mouth when the rod of deserved chastisement is upon your back.

THE BEST MUTTON SHEEP.

Having noticed several inquiries in your very valuable journal, asking for information relative to the best breed of sheep for the purpose of producing mutton, I am induced to give my views and experience on the subject, with the hope that others may do the same. The production of mutton has already become a very important branch of agricultural industry, and is yearly becoming more so. It is important for those commencing the business to start right. This is sometimes a rather difficult matter; at least such was my experience. After all the information I could get upon the subject, I selected the Cotswolds as likely to prove the most remunerative and satisfactory. After the experience of a number of years, I am fully satisfied of the correctness of my decision at that time. However valuable the Merinos and Saxons may be, where wool is the object—and for this purpose they stand unrivalled—I presume no one would advocate breeding them for their mutton. This admitted, the contest would be narrowed down to the Long-Wooled and Middle-Wooled breeds. Under the head of Long-Wooled are included the Cotswolds, Leicesters, Oxfordshires, &c. Under that of Middle-Wooled, the South-Downs. Of the former I will take the Cotswolds as the type, as they are the most extensively disseminated and best known. The South-Downs, it must be admitted by all impartial judges, are a very valuable breed of sheep, and I willingly accord them full credit for all their good properties, such as hardiness, symmetry, good quality of mutton, (but not quite enough of it,) and fair quality of wool. But with all these admitted good qualities, I think the Cotswolds are to be preferred. Well conducted and careful experiments made in England some years since, with a number of the leading breeds of sheep—the different lots being carefully weighed, as well as all the food consumed by them—pretty conclusively proved that the Cotswolds made more weight for the amount of food consumed, than any other breed. This does not look as if they were such voracious feeders, as has been intimated from certain quarters. It is true a large Cotswold will eat more than a small South-Down: but then he will make more wool and mutton. Perhaps when the pasturage is poor, the South-Down might have the advantage of the Cotswold, because eight legs and two mouths could run over more ground, and pick up more grass, than four legs and one mouth; but, on a good pasture, I would prefer the four legs, because they tramp and injure less than the eight. Stock feeders are well aware that heavy animals will command a higher price per lb. in the market than light ones, provided they are equally fat; this alone gives the larger breeds a decided advantage over the smaller ones. An objection that has been urged against the Cotswolds by some over-fastidious persons, is the quality of their meat; but this is a most groundless complaint. I most certainly doubt the ability of any one to distinguish the different breeds of sheep when served upon the table. Perhaps those who think they can, might even find difficulty in distinguishing them in the pasturage! For my own part, I must say that I have never eaten nicer mutton than well-bred and well-fed Cotswold. In this connection I must give an instance that was recently related to me, to show how far persons may sometimes be carried by prejudice. A butcher of the neighborhood, on going his round, mentioned to one of his customers, that he had brought him some very fine Cotswold lamb. On his next call, the butcher was informed that the lamb was not good, and that he must bring no more of it. The following week, he called the despised Cotswold, South-Down—which the connoisseur pronounced *very fine*, and requested always to be served with such lamb! There is a good deal of this kind of nonsense about quality. Much was formerly said about the superior quality of the Devons, but they have been almost entirely superseded by the heavy Short-Horns, notwithstanding the cry that was at one time raised against them of the coarseness of their flesh, of which nothing now is heard, and every one seems quite satisfied with a piece of good Durham beef. So I think it will be with sheep; the imaginary qualities of the South-Down, will not be able to compete with the superior weight of the Cotswolds.

Edgewood, near Westchester, Pa. C. E. H.

Culture and Product of Four Acres of Sorgho.

MESSRS. L. TUCKER & SON—I wish to give the readers of the COUNTRY GENTLEMAN my experience in raising and manufacturing four acres of Chinese sugar cane—not that I expect to impart information to those that have experimented with it for several years, but to call out articles on their experience, that myself and others may learn of them.

I selected four acres of low, black bottom land that had been in corn for several years in succession, previous, without any manure; plowed it up about the tenth of May; harrowed and planted in drills, with a drill, on the 18th of May—three acres four feet apart, and one acre three feet four inches apart—planted the seed dry, and in five days it began to come up, and in ten days was all up. There were about three times the number of plants necessary. As soon as it was large enough to see the rows plainly, it was worked through with a cultivator and hoed; in ten days afterward, it received a similar working, and in addition, was thinned out, and afterward two plowings. About the 20th of August the one acre planted three feet four inches, was flat down—that that was planted four feet, all stood up, except some spots that were left too thick.

Blading, Cutting, Boiling, &c.—It was principally bladed standing in the field, by hand. I tried a four-pronged fork corn cutter, as recommended by some, but could not make them answer the purpose. The next procees was to cut down and throw on the ground in armfulls, and then, with the corn cutter, chop about two feet of the top off, which was the most expeditious way I could find. It was loaded on to a four ox cart, and hauled to the mill about sixty rods off, and dumped. It was ground by a one horse iron mill. The juice run by a spout into a tub along side of the pan. I used a common sheet iron pan thirty inches wide and ten feet long, set on a common brick arch or flue. There was about one hundred and twenty gallons of juice run into the pan at once, which was boiled down as speedily as possible.

Commenced to work the cane on the 22d September. Very little of the seed had began to turn black.

It produced fourteen gallons of thick syrup to the pan, and gradually increased until it produced twenty gallons, which was the 6th of October, at which time the seed was about one-fourth of it black. From that time it gradually decreased to fourteen gallons to the pan, which was 1st November, at the time of finishing. Whether the decrease was caused by slight frosts about that time, or that was the proper stage to produce the greatest yield, I am not able to say. The cane produced about the same quantity of juice at the time of finishing that it did at the beginning. My experience, in former years, was that as cane ripened, the quantity of juice was less, but much richer.

It took one cord of four-foot wood to forty gallons of syrup, which I think too much. I used a common crane, hung to a post with ordinary gate hinges, to lift the pan on and off the arch, which proved to be very convenient for the purpose. One person can do it very easily.

What I wish to suggest by this article is, to inquire of those who have experience and know, which is the best mode of planting and cultivating, and the best mode of taking the blades off. Also if there is any way of constructing a flue for an ordinary sheet iron pan, so as to take less fuel, and whether there is any mode of planting, cultivating, or evaporating, that sugar can be produced from the sorgho or (any species of the African cane) in sufficient quantities to pay? Let us hear from cane raisers and manufacturers.

The account of the four acres stands thus:

Dr.

Plowing and harrowing,	$10 00
Planting and cultivating,	13.25
Barrels for syrup,	27.50
Interest on cost of mill and fixtures $100, at 6 per cent.,	6.00
Wear and tear on same,	20.00
Cutting, hauling, and boiling,	181.00
18 cords of wood,	18.00
Interest and tax on land,	16.00
	$291.75

Cr.

By 720 gallons syrup, 75 cents,	$560.00
	291 75
Net profit on four acres,	$248.25

The above item of wood seems very low, but I procured the wood of a neighbor for cutting and hauling; it was hauled in three lengths, and was cut at the pan, which labor was included in $181 item. The syrup is put very low; it is worth one dollar per gallon here. The above is not a very large showing, but considering the high prices of labor and large amount of labor to blade by hand, it is probably a good average of the profits of manufacturing syrup on a small scale. I intend next season to experiment by grinding without blading. The waste would probably be less than the expense of blading.

Sugar Grove, O., Dec. 31, 1864. R. L. SHARP.

BEST WAY TO REAR CALVES.

EDS. CO. GENT.—Agreeable to promise I will give you my mode of feeding and raising calves. Perhaps the numerous readers of the COUNTRY GENTLEMAN will say the subject is already exhausted, and that they know all about the small matter of raising calves. Perhaps they do, but as there is a great diversity of opinion on the subject, I hope you will pardon me for what little I may say. Economy in these times of high taxes, is quite an important item to every farmer, and as this principle can be applied with profit to a great many points in our profession, perhaps by an interchange of views we may be able to apply it in some measure to the subject of rearing calves.

Some claim that a good calf cannot be raised unless they draw the milk themselves from the cow; and others that they must certainly be fed new milk for two or three months. Now let us investigate this subject on the principles of economy, and see if it is profitable. Suppose the calf takes one-half of the milk of a good cow for 90 days, what would the calf cost at that age with butter at fifty cts. per pound? Only the moderate little sum of about $22.50. Rather a costly calf. But without any farther comments on the different modes of treatment, I will proceed to give my method, and in doing so I shall have to go into detail somewhat.

In the first place, I let the calf remain with the cow from two to three days; then put him away by himself, when the process of learning him to drink commences, and a little patience saves a great amount of trouble. The calf is usually tied with a rope, or put in stanchions, at feeding time, and in learning it to drink by putting the hand on the nose and pressing the fore finger on the end near his mouth, he will reach out his tongue, get a taste of the milk, and learn very readily to drink from the pail. I sometimes feed new milk for a day or two; then let the milk stand twelve hours, take off the cream, warm the milk, and feed to the calf for a week or so; then let it stand twenty-four hours, being careful not to feed too much so as to loosen the bowels; and after the calf gets to be four to six weeks old, it will eat almost anything you give him.

I prefer to keep them up in the stable or small yard, until they are two or three months old, and give them what hay they will eat, as this treatment keeps the bowels more regular than to let them run to grass. I find a small quantity of oil cake meal a very good addition for a month or two at first. A little dry clay I think very good for them to lap occasionally where they are kept confined.

I have seen very fine calves raised in this way, and have raised a great many good ones myself. I will give you the dressed weight of one eleven months old, that I raised a few years ago. It was fed all summer with skimmed milk with the addition of a little corn meal for the last three months. His dressed weight was 500 lbs., with 25 lbs. rough tallow. I do not pretend that a calf raised on skimmed milk will look as fine as those raised on new milk, but I claim that you can raise very good ones, and far more economically, and especially in the dairy districts where we have a large quantity of milk to feed.

One very essential point, in raising calves in this way, is to feed each calf by itself, so that each one shall have his regular mess, as some will drink a great deal faster than others.

I have always noticed where a lot of calves were fed all together in a long trough, there would be some very poor ones, and that is owing to some drinking faster than others. Now to those that are skeptical in regard to raising calves on skimmed milk, I say try it, and see if, on the principles of economy, you cannot make it pay. If you wish to fatten, add shorts or meal, and I have no doubt you will succeed to your entire satisfaction. JOHN SHATTUCK.

Norwich, Chenango Co., N. Y.

HEALTH OF PLANTS.

The whole economy of life and of nature is full of illustrations of the law laid down in the parable of the Sower: "For whosoever hath, to him shall be given, and he shall have more abundance; but whosoever hath not, from him shall be taken away even that he hath." The farmer sees this rule at work probably more frequently and more completely than any one else; he is able to discover that it is a physical as well as a moral law, and as applicable to inanimate things as it is to man. For instance, observe how wealth produces wealth, attracts it on all sides; and notice how poverty infects all around it as with a malaria. In the desert, as soon as a spring bursts forth (one source of wealth,) it creates a vegetation around it (another source.) This vegetation fertilizes the soil; fertility increases the vegetation and attracts animal nature, &c., &c. Look at the process again in the reverse: a man loses a crop, say, and his resources are so far forth straightened. Unless he puts forth an energy more than proportioned to meet this loss, everything thenceforth has a downward tendency with him. He robs his land of labor or manure, it yields hims inferior returns, and the entire ratio of deterioration is a geometric one. The state of the currency gives us another instance: it takes two dollars to buy the worth of one dollar—a result originally brought about by the effort to supply a deficiency of money by an over-issue, but which effort defeats itself, since in proportion as the deterioration increases, so will the deficiency augment. We see this in the case of the South, where the original attempt to buy one dollar's worth with the promise of two, made the promise of four necessary; then the promise of eight was needed, and so on up to fifty.

—But my reason for calling your attention to this law, was its vast importance in respect to general productiveness, in which regard it has a practical bearing upon all the sources of wealth. JOHN JOHNSTON knows the rule, for instance; he knows that in fattening stock he gets his money back in a geometric proportion. Every extra pound he puts on a beef pays him in a four-fold way—it pays him in the actual extra weight—it pays him in the extra quality of the meat thus produced—it pays him in the reputation his stock thus secure, a reputation which brings money—it pays him in the extra manure—the addition to the fertility of his soil—the increase of means for feeding thus secured—the increased profit giving him a chance continually to enlarge his operations, &c., &c.

So with regard to vegetable nature, and especially the *health of plants*. The effect of cultivation and of fertilizing observes this same geometric ratio. Faithful tillage pays not only by securing the existence of plants and thus obtaining their yield for us, but by rendering that existence healthy, it gives the plant strength to *help itself, to combat* disease, and so, to *help the farmer*. Why does John Johnston's wheat suffer less from the winter thaw than the wheat of his neighbors? Because he does justice to it, preserves its health, and so, gives it a strength of *its own* to resist the influences of severe weather, and to repay him four-fold. In one sense, the vegetable nature has just as great a feeling of gratitude as man possesses. It is certain to repay you for all the care you bestow upon it, and to repay you *out of all proportion to the cost of that care*. In the appreciation of that one fact, I take it, lies the whole secret of getting rich by farming.

I have been led to make these desultory remarks by an observation made by M. Ferris, an eminent French entomologist. He has been employed during fifteen years in tracing the habits of the different insects which prey upon the cluster pine (pinaster,) with which the Landes of France have been planted. He says "he cannot admit that these insects are the primary cause of the death of the trees which they attack, and that during fifteen years for which he, without intermission, studied their habits in one of the best wooded countries in France, he had observed a sufficiency of facts to justify him in expressing his opinion that *insects in general* (not including those which attach themselves solely to the foliage,) *do not attack those trees which are in good health, but only address themselves to those whose health and functions have suffered from some cause or other.*"

"Lignivorous insects are only to be dreaded by sickly trees. They are like some mosses and lichens which only attach themselves to enfeebled trees, while healthy well-grown trees preserve a smooth bark, and repulse these vegetable parasites." * SELVA.

Randallstown, Md.

Make the Soil Rich at the Surface.

In the Co. GENT. of Feb. 2—p. p. 80, 81, are interesting articles on two subjects, which are fundamentally important to good farming, and they illustrate the slowness with which real and saving improvements gain favor, even among the farmers of our wide-awake times, and under the very beams of the light diffused by the agricultural press.

How did the idea ever become so general that manure wastes injuriously by evaporation? Even scientific men have long helped to frighten farmers into false, laborious, difficult, unpleasant, wasteful processes of supposed saving, but real waste. If excremental manures were continually giving off their valuable properties to the air instead of the earth, what kind of an atmosphere should we have! How filthy would be the dew, the rain, and the sweet fresh air. And if the soil did not attract and receive these properties from the water, which really conveys them away (little more than an etherial odor going off to the air) what would be the condition of our springs and wells? They would be thick with pollution. It seems strange that all our people have not disabused themselves of these early prejudices, as Mr. Johnston and Mr. Garnett have done.

In the culture of trees and vines, to which I have devoted most attention, I have long noticed it to be much healthier for the plants, to strew manure on the surface, in autumn, over the feeding fibres, which stretch upwards from the main roots, and ramify near the surface. If manure is buried with the roots of trees, it is actually poisonous; and if applied in the spring, in any way, it does not affect growth until the season is advanced, when a strong fall growth is apt to be induced, which does not ripen well, and the soft, rank shoots are injured by early frosts, while yet full of watery sap, or drying winds parch them; the

immature bark having no varnish to protect the shoot from desiccation.

The second subject relates to that desirable, but long-a-coming attachment to the plow, an attached subsoiler. Who makes them? Where are they to be had? Where is Mr. Pierce of Homer, with his attachment, of which I have heard great praise. Their usefulness is, in part, founded on the same principle as is alluded to above, that of keeping the manurial elements, vegetable matter, sod, near the surface, within reach of the decomposing and corrective influences of the air, instead of burying it deeply. This attachment secures this condition, while it breaks up the soil thoroughly. W. G. W.

Tyrone, Pa.

AVERAGE PRODUCT OF 337 COWS.

The following interesting report of the doings of the Trenton Union Ag. Society, (Oneida Co., N. Y.,) was furnished by the Secretary STORRS BARROWS, Esq., to the Utica Herald:

At the Annual meeting of the Trenton Union Agricultural Society, a year ago, a resolution was taken requesting the members to keep an account of the yield of their respective cows for the year 1864, and report the same to the secretary in a written form.

Nearly all of the towns embraced in the Society have more or less been represented, and handed in the following reports.

We have condensed the minutes by omitting entirely the amount of feed, (other than hay and grass,) whether it was extra, double extra, bountiful, sparingly, or not at all. The reports state that the above mentioned *courses*, were severally practiced by different individuals. In many localities the drouth was severely felt, causing a great falling off in the yield of milk.

In examining the report the reader will have no difficulty in determining which of the above courses is the one to be practiced for profit.

Names.	*Residence.*	*No. Cows.*	*Per Cow.*
Miss Leah Litter,	South Trenton,	3	$106.42
Storrs Barrows,	do.	10	102.35
Dudley W. Rhodes,	do.	6	97.24
Farmer,	do.	—	68.00
C. & C. M. Gouge,	do.	13	73.73
Wm. Conley,	do.	4	88.00
Geo. W. Wheeler,	Trenton,	52	118.93
Mrs. DeCastro,	do.	5	152.22
V. Lawton,	do.	1	120.00
Luther Egert,	do.	2	72.20
Chester Wolcott,	do.	10	81.72
Chas. A. Willard,	Holland Patent,	7	113.71
Farmer,	do.	—	91.13
Farmer,	Steuben,	21	90.13
Farmer,	Remsen,	42	89.01
M. A. Blue,	Deerfield,	38	73.00
Farmer,	do.	30	75.75
Farmer,	Stittsville,	—	69.99
Farmer,	Newport,	10	71.03
Farmer,	Floyd,	—	81.01
Gardiner Hinkley,	Russia,	52	104.50
Asa B. Downer,	do.	18	95.06
Manassa Flint,	Marcy,	13	78.16

Judge Graves of Herkimer, who is a member of this Society, gave a statement of a cow that he once owned (an ox in size, perfectly healthy, and an enormous feeder,) that gave in the last 20 days of June 83½ pounds of milk per day, and made in seven days days 27⅝ pounds of beautiful butter.

Mrs. De Castro's report I will copy *verbatim* and at the same time remark: In the first place, probably, she has as good cows as can be produced in Oneida county; next, they are cared for by one of the most systematic men to be found in the management of cows; bountiful feeding, regular milking, &c. To sum up the whole, there is nothing left undone, in care and attention, to produce the greatest amount of milk.

MRS. DE CASTRO'S REPORT OF FIVE COWS, IN 1864.

Cash received from the factory,	$657.62
Butter, 160 pounds at 50 cents,	80.00
Milk,	16.00
Calf skins and rennets,	7.50
	$761.12

STORRS BARROWS, Secretary,

South Trenton, February, 1865.

Quantity of Hay per Head of Cattle.

MESSRS. L. TUCKER & SON—In reference to the consumption of hay by cattle, I add my mite to the discussion. On the 3d of January last, I drew a stack of timothy, blue or June grass, and white clover hay. The top of the stack, 500 lbs., was put in racks in the cattle yard, and 7990 lbs. into the loft of the cow-stable. This hay was given to the cattle for the first time at 4 P. M. on the 3d, and the last of it was fed at 7 A. M. on the 14th of January. That in the racks was gone by the 10th of January. The stock was 22 cows and heifers, and 11 yearlings. The estimated weight of the stock was 26,000 lbs. The 33 head consumed per day, 772 lbs., equal to 23 4-10th lbs. each. Each 100 lbs. of live weight consumed 32 65-100th lbs. during the 11 days, equal to 2.96 lbs. per day. Two of the cows were in milk, and were fed two quarts of grain each, in addition. The cows average in weight 1000 lbs.; consequently they consumed nearly 30 lbs. of hay each per day. The heifers are two and three old, and weigh 800 lbs. each. They consumed 23 68-100th lbs. each per day. The yearlings 600 lbs. each, and consumed 17 76-100th lbs. each per day. The hay was fed up clean; it was well cured, and the cattle are in good order. W. D.

Ashland Farm, Jefferson Co., N. Y.

Corn Smut Poisonous to Cattle.

EDS. CO. GENT.—Please find inclosed a slip cut from the Am. Farmer, about smut on corn. I consider it a poisonous fungus somewhat similar to ergot in rye, which also is found in various other grasses, and to the presence of which, in part, I attribute the fact that cattle will not thrive some seasons as at others, even with the greatest abundance of hay.

West Cornwall, Conn. T. S. GOLD.

IS CORN SMUT POISONOUS TO CATTLE?—Mr. E. Wood, of Lester, Iowa, says the Prairie Farmer, lost three oxen, three cows and three calves last winter, he supposed from eating the snouts of cornstalks. He raised one and a half acres of King Philip corn, which was very smutty, "not only many ears with smut upon them, but occasionally bunches of clear smut—all left on the stalks, bound and stacked." When cold weather came on the cattle were fed plenteously on these stalks. On the morning of the third day he found one dead; the eight died within two days. They were supplied with water daily. "The first symptoms were weakness; would reel in walking. If lying down, would lie apparently easy for two hours; then begin to twitch or jerk the shoulders, breathe hard, roll on the side occasionally and groan. For one or two hours before dying, would lie continually on the side, with legs stretched out, and manifest extreme pain; would die within six or eight hours after showing the first symptoms of the disease." All masses of smut grown on cornstalks, or any part of the ears of this grain, should be carefully removed, so as not to taint the fodder or seed of the plant consumed by man or beast.—*American Farmer, Sept.*, 1861.

Death of Wm. F. Ketchum.—The inventor of the Ketchum Reaping and Mowing Machine, W. F. Ketchum, died of apoplexy in Buffalo, on the 24th ult

HAWK OWL---*Surnia ulula.* LINN.

Our engraving at the head of this article, represents the bird we propose to describe—the Hawk Owl. Before commencing, however, it will perhaps be as well to inform the reader how very difficult a subject we have to treat of.

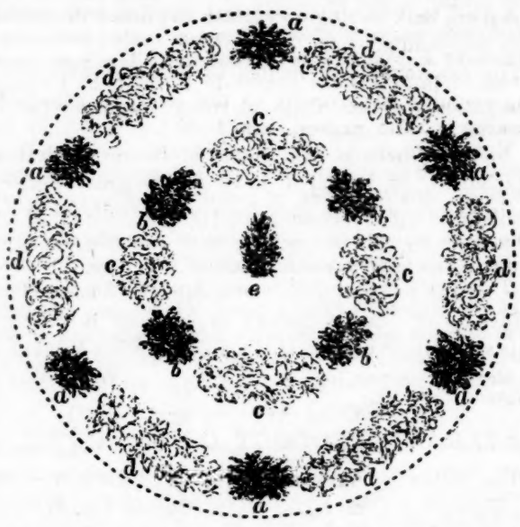
The Hawk Owl being an inhabitant of the far north, has never been seen by the writer alive. This was the case with AUDUBON, WILSON, NUTTALL, and a host of others. Thus you perceive we are cut off from obtaining any information from that point. These, and many other equally good reasons, have made it not within our power to give a full account of the habits of this bird.

The Hawk Owl inhabits the arctic regions, and has been noticed as far north as any man has yet penetrated. In the winter season, however, it migrates more to the south. Its southern limit may be placed at the St. Lawrence River. In the vicinity of Hudson's Bay it is to be found in considerable numbers. It also inhabits Denmark, Sweden and Siberia. We believe that the European bird is identical with the American.

Philadelphia. J. P. NORRIS.

BEDDING PLANTS AND ANNUALS.

The finest effects are obtained from two methods of arrangement—1st. The promiscuous—2d. The combination. Both plans require some practical knowledge of plants, and how to grow them. We must know their habits, height of flower stock, color, and period of blooming. Every cottage garden is an example of the promiscuous style of planting, not one in fifty giving evidence of more than the outline rudiments of horticultural knowledge. The combination bed is used for want of a better term, being equally applicable to the other arrangement. But the difference is this: In the promiscuous bed, single specimens are the rule, and we have evergreens and deciduous shrubs in juxtaposition with herbaceous plants, bulbs and annuals, all growing together in a kind of amicable confusion. The combination bed is planted according to a preconceived plan, which admits of almost endless variety. By judicious arrangement, all that is good in the modern idea of "bedding plants," may be exemplified in this system. All the massing of color, consistent with good taste, can be realized, with additional effects that cannot fail to please the eye. And $10 worth of these plants will go as far as $20 in filling up the beds.



EXPLANATION—*a*. Daphne Cneorum—*b*. Salvia patens—*c*. Geraniums and Gladiolus—*d*. Lobelia speciosa Paxtonii—*e*-Golden Arborvitæ.

Two bulbs of Lilium lancifolum album, behind the center of the Lobelia, fronting the Salvia, has a fine effect. If exposed to the sun, with no shade whatever, the Lobelia will require to be watered, (not superficially,) twice a week in parching weather.

An instance or two will suffice to explain the modus operandi. We shall suppose a circular bed with sufficient space for two distinct lines of plants and one central prominent object, in this case, a golden arbor vitæ. The first, or outside row, must be dwarf. At regular intervals, six nice plants of daphne cneorum would be set out, either in the fall or spring, eighteen inches from the edge. This charming evergreen requires to be pegged down twice a year, when, instead of an unsightly straggling usurper of space, it becomes a dense mass of refreshing green, in May covered with deliciously scented pink blossoms, which are sparingly renewed in the fall. Between each plant of daphne, young plants of lobelia speciosa paxtonii are to be set out in May, covering the whole blank space—say about one root to every five inches. Presently these will close up, and flower throughout the season—color, vivid blue and white. (The lobelia is easily raised by sowing the seed in pots, end of March—placing a square of glass above the soil to retain humidity, and administering water in very minute doses. When the seed leaves appear, remove the glass.) If it is desired, a different plant may be used between each of the daphnes, and so have a variety of colour. But these must all be of the same height. For instance, lobelia; verbena, purple; variegated balm; verbena, white; northern Drummondii, (annual); verbena, crimson; or each of the six spaces may be occupied by the best of all annuals, phlox Drummondii—a separate color in each.

The second, or inner line, is to be struck half way between the first line of plants and the centre specimen—in this instance a golden arbor vitæ of some size, or a well shaped tree box. On this line are to be set out four plants of salvia patens, (the most beautiful blue and prolific bloomer we have during the fall months.) The first of these being planted half way between two of the daphnes, and the other three at equal distances. If properly set out, these salvias will stand as the corners of a square, with four blank spaces between—each of these spaces to be occupied by bedding geraniums. These may be all of the same, or each different. The best effect is to be had from a variety, viz: Paul l'Abbey, the very finest cerise red: Christine, by far the best pink, ever blooming; Kingsbury Pet, the best salmon; Princess Alice, or Gen. Pelessier, bright scarlet. The salvias must be carefully trained, and tied to thin but re-

liable sticks, as their habit of growth is erratic. It is a good spot on which to locate one dozen of gladiolus—three bulbs, half way between each salvia, that is to say, in rear of the geraniums. The long bare stems of the gladiolus penetrate through and above the geraniums, the foliage of which supplies what is lacking on that gorgeous cape bulb.

Extend the capacity of the bed, and we have then space for an intermediate circle, arranged on the same principle as the others, or better still, alternates, say double white feverfew and antirrhinums, both of which bloom freely all the season, with judicious cutting back as the earlier blooms pass off.

The above is one of the many outlines for the effective planting of beds on a lawn. The same principle is applicable to borders, with a backing of evergreen and deciduous shrubs. It must be borne in mind that a large number of herbaceous plants can be appropriately used to produce bedding effects, and these, instead of being killed by the first frost, are perennial, increasing the stock every season. There is no necessity, therefore, to lay in fresh supplies of bedding stock every spring. An ample list of these I propose to furnish in a succeeding article, with the addition of some tropical plants that can be raised cheaply from seed, and planted out either in beds, or on the lawn, with splendid effects.

A sketch of the bed is given herewith, as above described. SCARBROENSIS.

The Factory System of Cheese Making.

Our friend Mr. HARRIS, of the Genesee Farmer, thinks that the Factory System of Cheese Making can only continue profitable while the premium on gold sustains the present price of the article. He says:

> The average price of cheese sold by the different factories the past season, must be taken at 20 cents per pound. With gold at $2.25, which may be taken as the average of the past year, this would give us not quite 9 cents per pound for cheese in specie. The extra 11 cents per pound now obtained is purely fictitious. Take this away and where would be our "cheese factories?"

In our last "Foreign Notices" we quoted a statement from the London Mark Lane Express, to the effect that the actual cost of production for cheese in England, is rather above than below 5d. or 6d. a pound. Taking this as 10 or 12 cents of our money, we think we might fairly assume that our cheese, *if of a quality such as to command the full price of good English cheese*, would be sure to sell in that market *at least* for the price above named. But allowing for freight and profits of dealers, and taking 9 cents as its probable home value,—if the cheese made in Factories is sure to obtain this price, while that made in the ordinary way will not average perhaps more than 6 to 8 cents, we confess we can see no reason why the one cent per pound paid the factory for making, will not then be as good an investment as it is now. The average prics of cheese in New-York for twelve years past, according to the table appended to the last report of the Secretary of the Treasury, have been—taking the two months of February and August:—

	Feb.	*Aug.*		*Feb.*	*Aug.*
1851, ...	6 @7	4@6	1857, ...	11 —	5 9
1852, ...	6 7	6 —	1858, ...	6 7	4 8
1853, ...	8 9	8 —	1859, ...	8 10	6 8
1854, ...	10 12	7 9	1860, ...	9 11	7 10
1855, ...	9 10	6 9	1861, ...	9 10	5 7
1856, ...	9 10	6 9	1862, ...	5 7	4 8

During these years the price has been more frequently below than above 9 cts.; and it has been a price, we think it fair to assume, as a general rule, created by *the home market*—not by the demand for export. Thus, in 1859, and again in 1861, it touched 2 cts. a pound in the month of July; in 1858 3 cts. in August; in 1862, 4 cts. in the same month; and at some time during the summers of the other 12 years, it went down as low as 6 cts., except in 1853, when the lowest price was 8 cents., and in 1860, when the lowest price was 9 cts. Such are the fluctuations to which the home market is subject; and if, as we do not think it too much to hope, the factory made cheese will command a uniform price, based upon the actual cost of production abroad, of at least 9 cts. per lb.—or even of 8 cts.—the difference in its favor over that sold in the home market, when unsustained by a foreign demand, would vary all the way from one to six cents per lb. during the season of production.

The question, as we have before said, appears to us to hinge mainly upon the point of QUALITY; and the great danger to the factory system arises from the chance that in the demand for managers, inexperienced and ill-qualified persons will assume that post, under whose control the product, instead of being constantly brought more nearly to the foreign standard, may be allowed to run back to something like the old average of home-made cheese. As to the cost of carrying the milk to the factory, our contemporary overlooks the almost universal arrangement now adopted, by which the same team carries the milk of all the farmers in a certain beat; but admitting his figures to be correct, we believe the labor and cost of carrying the milk to be less than that of making the cheese in the house, and as above stated, that with the exception of a few of the most careful and skillful dairymen—taking the average of the dairy farmers—the larger price received for the cheese made at the factory will more than make up for the charge involved. One cent a pound covers this charge, in ordinary times—the proposition to increase it arises merely from the temporary increase in the actual expenditure for labor, &c.

RECIPE FOR SALTING BEEF.

The following recipe may be a little late for some families this year, but nevertheless "will keep." I had it from an old housekeeper, and having proved it for two years, know it to be good. By this rule beef will keep through the summer without any farther attention than the first salting. To 100 pounds beef use 4 quarts rock salt made fine, 4 ounces of saltpetre also pulverized, and 4 pounds brown sugar. These ingredients are to be well mixed together before using. Scatter some of the mixture over the bottom of the barrel, then a layer of beef, then the mixture as before, and so on till all the beef is laid down. Put rather more salt on the top layer than on the others; pack close and keep in a cool place. Those who try this recipe will not need another.

Bennington, Vt. E. C.

HOW TO HANG AN AXE.

A simple rule for even a simple thing, will often save much time. A tool that is used so much as an axe, should be properly adjusted, as every blow will tell of the ease or hardship of the hanging. The rule is very simple. It was given me by two persons, each of whom is much accustomed to edge tools. Put the helve loosely into the axe at first, so that it can be moved to the proper position; now let the centre of the edge of the blade of the axe and the but of the helve (or part taken hold of,) be brought each down to a horizontal line, which may be done by simply placing them on the floor, and the axe is ready for wedging. E. C.

THE CULTIVATOR.

ALBANY, N. Y., MARCH, 1865.

☞ It may be well to remind the many friends who have kindly sent lists of subscribers for this paper the current year, that additions to these lists may at any time be made at club rates. There are some localities in which owing to the removal of those who had undertaken the agency in former years, the usual clubs have not as yet been formed. We desire to say that club subscriptions are only received when *paid strictly in advance*, and that those desirous of taking advantage of the reduced rates offered to clubs will thus consult their interests by moving in the matter at an early day.

Cheese Factory Statistics.—At the recent meeting of the State Cheese Manufacturers' Association in Utica, interesting and valuable statistics were presented from a considerable number of factories in different localities. The returns from twenty-five of these factories were complete on the four points embraced in the subjoined table, which we have been at some pains to prepare from the statements read before the meeting, in concise form, for the COUNTRY GENTLEMAN. These figures illustrate the extensive business now done in making cheese, on the factory system:

NAME OF FACTORY, AND COUNTY OF LOCATION.	Average No. of Cows.	Amt. of cured cheese made, in pounds.	Av. price per lb. in cents and fractions.	Av. lbs. milk required for 1 lb. cured cheese.
Holmesville Factory, Chenango,	400	114,246	20.62	9.90
Miller's, Lewis,	580	183,111	22.77	9.54
Collins', Erie,	851	249,608	20.73	9.85
Hawleyton, Broome,	265	68,660	21.80	——
Coal Creek, Herkimer,	475	176,000	18.80	10.00
Stevens', Lewis,	750	207,121	21.60	10.16
Charleston, Montgomery,	335	98,101	22.25	9.84
Nelson, Madison,	575	199,884	19.69	9.78
West Schuyler, Herkimer,	550	196,916	21.90	9.71
Springfield, Otsego,	300	137,866	21.29	9.97
Mile Strip, Madison,	360	122,105	21.14	9.85
West Exeter, Otsego,	500	172,894	21.75	10.07
Brookfield, Madison,	200	64,999	24.25	8.31
Orwell, Oswego,	250	72,557	21.70	10.00
North Litchfield, Herkimer,	375	127,275	21.70	9.90
Deansville, Oneida,	275	83,094	21.33	10.38
Deerfield and Marcy, Oneida,	1,032	295,115	20.07	10.26
Stanley's, Jefferson,	400	134,050	18.80	9.90
Scriba, Oswego,	400	100,744	20.00	9.35
East Berkshire, Franklin,	500	101,539	24.00	10.00
Oneida Lake, Madison,	270	55,422	21.42	10.30
Ingraham & Hustis, Jefferson,	600	142,518	23.09	9.95
Gilbert's, Oswego,	350	110,465	18.97	10.01
McLean, Tompkins,	937	302,084	22.50	9.60
Whitestown, Oneida,	600	204,025	22.70	10.05

Total number of cows reported,	12,130
Total pounds of cheese made,	3,720,399
Average lbs. of cheese for each cow, (nearly)	308½
Average lbs. milk to 1 lb. cured cheese, for 24 factories,	9.86
The largest average number of lbs. of cheese for each cow, is that reported by the Springfield Center Factory, Otsego Co.,	459 lbs.
The next largest, by the Coal Creek Factory, Herkimer Co.,	370 lbs.
The smallest number lbs. milk, per lb. cured cheese, reported by Ellison's Brookfield Factory, Madison Co.,	8.31
The next smallest, by Whittemore's Scriba Factory, Oswego Co.,	9.35
Aggregate Sales of the 25 Factories, at an average of 21 cts. 4 mills per lb.,	$795,979.37
Average Sales of each Factory, 148,816 lbs.,	31,839.18

It will be observed that the weights of cheese made, as above given, are those of *cured cheese*. Five factories give the weight of the cheese when *green*, as well as when cured, and as this illustrates the shrinkage before marketing, we give the aggregate, as follows: These five factories manufactured 719,759 lbs., weighed in its green state, or 679,872 lbs., weighed when cured—a loss of 39,887 lbs., or about 5.54 lbs. in the hundred. But the shrinkage reported varies considerably in the five cases, perhaps from the different lengths of time elapsed before the cheese was sold—in one instance being about 5 per cent., in another a small fraction less than 5 per cent., in a third about 7 per cent., and in a fourth, a small fraction more than 7 per cent. The average sizes of the cheese made are given by nearly all the factories—the greater number running at about 100 lbs. each, and three at about 150 lbs.

Department of Agriculture.—The "Monthly Report" of the Department, for January, is just received as we go to press. We have not had time for the examination of its contents, except to see that very few pages have any connection whatever with the operations of the Bureau. Mr. NEWTON announces that "the present report may be regarded as indicating the general character of the monthly reports for the present year." In other words, his zeal to keep himself before the public is such that he cannot be satisfied without endeavoring to establish what is neither more nor less than a *government agricultural paper*. When an effort was before made in the same direction, in common with the rest of the agricultural press, we warned Mr. NEWTON that he was quite overstepping the bounds of his official duty, or the proprieties of his position. Temporarily the effort was abandoned.

It is perfectly in place perhaps that bulletins of what the Department is doing, and of the statistical returns obtained, should be issued at the necessary intervals; but here we have a regular plan laid down, of "a leading article of strictly agricultural character," such that "the farmer may immediately apply the information communicated in the practical operations of the farm"—also "shorter ones on topics more general, but still connected with the interests of agriculture." By what authority does Mr. Newton assume to do any thing of the kind? The idea that the government should undertake to furnish the public with a monthly magazine of this sort, is wholly inadmissible, and the self-conceit manifested in Mr. Newton's preliminary remarks is becoming insufferably ridiculous. If Mr. NEWTON'S vanity leads him to suppose that the agricultural press regards his proposed "Monthly Report" as a formidable rival to their own interests, he may at once disabuse his mind of any such notion. But, aside from any other ground of objection, it is enough to say that our subscribers *pay for the papers they receive*; it is wholly unjust that the Department should furnish its favored friends with a periodical *free of charge*, particularly while our taxes for other purposes are as heavy as they are at present.

Classification of Merinos.—Among several letters on this subject we take the following remarks from a private note from a Vermont subscriber: "Your very interesting article on the classification of sheep for premiums is exciting much attention. It is a very important subject. You must offer premiums or have no Show, and such an arrangement as will bring the greatest number for exhibition would perhaps be most expedient, though injustice may sometimes be done, and that more for want of a good selection of judges than from an improper classification. If sheep breeders were influenced by the same spirit as is shown by many others, in exhibiting their stock, your State Fair might become the the great place for the showing and sale of good animals."

Connecticut.—The Sheffield Scientific School of Yale College, to which was appropriated the public land grant for the promotion of Education in Agriculture and the Mechanic Arts, for the State of Connecticut, has now organized its course of instruction under the following professors:

S. W. JOHNSON, Professor of Chemistry.
W. H. BREWER, Professor of Agriculture.
DANIEL C. EATON, Professor of Botany.
ADDISON E. VERRILL, Professor of Zoology.

Of the new instructors, Prof. Brewer was a pupil of the lamented Prof. Norton, and for the last four years has been chief assistant in the Geological Survey of California. He previously occupied the chair of Natural Science in Washington College, Pennsylvania. His chair in the Sheffield School is appropriately called the "Norton Professorship." Prof. Eaton is a pupil of Prof. Gray of Cambridge, and is a zealous and successful teacher of his favorite science. Prof. Verrill has been a student with Prof. Agassiz for six years, and has devoted great attention to agricultural zoology—the origin, races, and breeding of domestic animals, and birds and insects useful or injurious to agriculture.

We are pleased to learn that probably within a short period a magnificent edifice will be erected and become the property of the College, and that in it will speedily be gathered a series of collections in all departments of Natural History worthy of this ancient Institution. The new courses of Instruction in Agriculture will be open to students at the beginning of the next academic year, Sept. 13, 1865. Full announcement will be shortly given to the public.

New-Jersey — Geological Survey. — The State Geologist of New-Jersey, Prof. GEO. H. COOK of New-Brunswick, has been quietly engaged with his assistants for several years, upon a complete Geological Survey of the State—a State perhaps destined eventually to become the garden of the Union, possessing as it does markets of insatiable extent directly at its doors, with wonderful supplies of fertilizing material accessible, both from external resources, and along its shores and beneath its soil. In his report for 1864, Prof. C. embraces several points directly of agricultural interest, including analyses of marls from several beds. The marl region of New-Jersey had been previously shown to comprise "a belt of country from five to fifteen miles wide, reaching from Raritan Bay and the Atlantic Ocean, on the northeast, to the Delaware river on the southwest," constituting a regular geological formation, in which rich beds of fertilizing material called *marl* or *green sand*, in three distinct layers, each from fifteen to thirty feet deep, extend continuously across the State, parallel to each other and to the whole formation. These conclusions are farther verified in the investigations of 1864, and the marl is used in constantly increasing quantities in all parts of the State to which it can be cheaply transported, and is "rapidly aiding to bring the most unpromising soils to a high degree of fertility." Its principal fertilizing element is "phosphoric acid, probably combined with lime," while other constituents, although in a much smaller degree, add to its value. The Gaskill marl beds, which we visited two or three years ago, during 1864 shipped by railroad 22,000 tons to various points.

Prof. COOK estimates that there are in New-Jersey more than a million acres of good land still unoccupied and almost unproductive, perhaps one hundred thousand acres of wild and unreclaimed meadow, and a vast extent (nearly a million of acres more) of tide marshes that might be brought into agricultural use. The limestones of the State afford a vast supply for the farmer's purposes, but the past year's survey shows that the best of them are not yet generally known or used.

Obituary.—The Senior editor of the Maine Farmer, Dr. EZEKIEL HOLMES, died at his residence at Winthrop, Feb. 9th, after a brief illness, in the 64th year of his age. Since January, 1833, with the exception of intervals while engaged in other duty, he had had charge of the Agricultural Department of that paper, which he conducted with great good sense, giving it the honorable rank it has always held, and rendering it a most serviceable instrument in the cause of improved farming. Aside from his influential position as an agricultural writer, he had occupied other prominent public positions. The last number of our contemporary says:

"After his removal to Winthrop in 1832, he filled the professorship of natural science in Waterville College, several years; in 1835 he was appointed to make a survey of the public lands of Maine and Massachusetts, under a joint resolution of the Legislatures of the two States, a duty which was faithfully and ably performed by him; he was for five years successively, elected a representative to the Legislature from the town of Winthrop, and has also served several terms in the State Senate from this district; in 1852-53, he was the Liberty party candidate for Governor of the State; he was the first Secretary of the Board of Agriculture, and the first Secretary of the State Agricultural Society, which latter position he continued to occupy at the time of his decease. The latest official service rendered by Dr. Holmes was the Scientific Survey of the State, which was prosecuted under his direction in the year 1861-62, and its results given in Mr. Goodale's Annual Reports of those years."

In the House of Representatives of the State, the following resolutions were moved, in his memory:

Resolved, That in the recent decease of Hon. Ezekiel Holmes, the State of Maine has lost one of her most useful citizens.

Resolved, That in testimony of our respect for the memory of the deceased, these resolutions be entered on the journal of this House.

"Practically acquainted with the minutest details of farm operations, and always a diligent student of the principles which underlie them, he also possessed a remarkable facility and clearness of expression, which enabled him successfully to bring his views and convictions upon all subjects distinctly to the comprehension of the common mind. That his editorial labors have been appreciated, is abundantly demonstrated by the support which has always been so generously accorded to the paper of which he was the founder, by the people of Maine."

A Market for Corn Husks.—Mr. D. H. CRAIG, Agent of the Associated Press, New-York, invites "proposals from every town, county and State in the United States for supplying clean, sound and well-dried husks, as the same are stripped from the ripe corn; the husks to be baled in even hundreds of pounds and delivered at railroad stations." They are to be used in the manufacture of printing paper, under recent discoveries of which the publishers of the leading daily papers have secured control.

Connecticut.—The following have been elected officers of the State Agricultural Society for 1865:—

President—E. H. HYDE of Stafford.
Vice Presidents—Robbins Battell of Norfolk; H. L. Stewart of Norwich.
Directors—J. J. Webb, New-Haven Co.; C. M. Pond, Hartford Co.; P. M. Augur, Middlesex Co.; Jedediah Spalding, New London Co.; G. C. Hitchcock, Litchfield Co.; R. B. Chamberlain, Tolland Co.; B. F. Sumner, Windham Co.; Thomas A. Mead, Fairfield Co.
Corresponding Secretary—T. S. Gold, West Cornwall.
Recording Secretary—Burdett Loomis, Windsor Locks.
Treasurer—F A. Brown, Hartford.
Chemist—Prof. S. W. Johnson, New-Haven.

Iowa.—The Annual Meeting of the Iowa State Agricultural Society was held at Des Moines, Jan. 11th. Hon. P. Melendy of Cedar Falls, was elected President; Dr. J. M. Shaffer of Fairfield, was re-elected as Secretary, and Edwin Smith, Esq., of Davenport, was re-elected as Treasurer. It was resolved that the next Fair be held at Burlington.

A Box of Apples.—We have received from A. L. BENEDICT of Ashley, Ohio, a collection of twenty-one varieties of the apple for inspection and comparison with those grown in New-York. Ashley is in central Ohio, a little north of Columbus, with nearly the same latitude as Philadelphia. Among the more common varieties, the only difference observed is generally a larger size and an earlier ripening in these specimens as compared with those grown in this State. The *Swaar* is large, fair and handsome, but somewhat diluted in flavor; *Esopus Spitzenburgh* is softer and riper than here; the same remark will apply to the *Yellow Bellflower;* the *Willow Twig, Kaighn's Spitzenburgh, Westfield Seeknofurther, Black Gilliflower,* and *Roman Stem,* are quite similar to specimens of the same varieties grown here. The *Ortley* is fair and handsome, while ours are usually scabby; the specimens marked *American Golden Russet* are not Bullock's Pippin, but the *Golden Russet* known as such in Western New-York—a variety with somewhat flexuous shoots and speckled bark. The *White Rambo* accords in appearance and character with Elliot's description. The *Whitmore Sweeting* is a rather large, roundish oblong or ovate conical fruit, light yellow, flesh rather coarse, very sweet, juicy and "good." *Sweet Vandervere* differs from Charles Downing's description under this name, all the specimens being rather oblate than oblong—the cavity and the basin being rather shallow, and the form regular and not angular; the flesh is fine, crisp, pleasant, spicy, not quite sweet, "good," or "very good." The *Bethlehemite* accords nearly with Elliot's description, and is a pleasant, agreeable sort. The *Red Winter Sweet* appears to be undescribed in books. It is rather small, oblate in form, of a uniformly very dark red color; flesh rather tough, (like the Carthouse,) of a sweet moderate flavor. It is described as productive and a long keeper, and we should think might be valuable for the winter feeding of domestic animals. The *May* (of Myers,) is medium sized, roundish, slightly conical, light green and brown; flesh rather dry, nearly sweet, rather deficient in flavor. It is stated to be a very long keeper, whence its name *May.* It will probably never become popular, as long keepers should have a decided rather than a deficient flavor,—although a good-looking fruit, somewhat of the appearance of the Newtown Pippin or Peck's Pleasant.* The *Red Janett* is a large oblong or ovate fruit of a fine deep red color, and rather handsome appearance, but we think it rather too coarse to be of much value.

Subsoil Attachment to the Common Plow.—A correspondent of the CO. GENT. at Amherst, Mass., sets forth the merits of a subsoil attachment to the common plow, as follows:—"No intelligent farmer need to be told of the advantage of stirring the soil deep. The double Michigan plow does this, and answers a good purpose, where the soil is as deep as in the State from which it takes its name. But in New-England, with a light soil, it does not answer to bury the turf and top soil to much depth with the subsoil, unless you add manure in proportion. A subsoil plow to follow the common one, will probably pay the extra cost, where large farmers have plenty of hands and teams—but few are thus provided. The subsoil attachment is put upon the ordinary plow at a small cost. Having gauged the plow to the desired depth, say six inches on turf land for corn or sowed crops, then the attachment pulverizes the subsoil any depth, according to the capacity of the team, from six to twelve inches, leaving all below the sod well stirred. The draft is not heavy—a good pair of horses, or a yoke of oxen and a horse, will do the work easy. It seems to me to be the greatest improvement yet made upon the common mode of plowing. And I am of the opinion that every acre plowed in this manner, will pay the cost of the attachment."

*See Report of Ohio Pom. Society, for 1861.

Cheese Statistics.—The Utica Herald gives the quantity of cheese shipped from Rome, Oneida Co., during the past season, legitimately belonging to the county of Oneida, and which does not include the cheese coming down the Rome and Watertown railroad and re-shipped at Rome. The number of pounds is stated as follows:

By Railroad,	2,665,804	pounds.
Canal,	536,818	do.
Total,	3,202,622	do.

This, at 20 cents per pound, amounts to $640,524.40. The Journal and Courier, at Little Falls, furnishes a statement made by Henry W. Priest, the efficient Railroad Freight Agent at that place, of the butter and cheese shipped from Herkimer county during the year 1864. It is as follows:

CHEESE.

	No. pounds.	Cost.	Amount.
Frankfort,	902,598	20 cents.	$180,519.60
Ilion,	4,010,491	20 do.	802,098.20
Herkimer,	4,519,230	20 do.	903,846.00
Little Falls,	5,958,102	20 do.	1,101,620.40
Canal,	1,377,573	20 do.	275,514.60
Total,	16,767,994		$3,353,538.80

BUTTER.

	No. pounds.	Cost.	Amount.
Frankfort,	15,584	45 cents.	$7,012.80
Ilion,	159,217	45 do.	71,647.65
Herkimer,	141,441	45 do.	63,548.45
Little Falls,	163,215	45 do.	73,446.75
Canal,	13,226	45 do.	5,950.70
Total,	492,683		$221,606.35

The estimate of cost is probably not far out of the way, as in cheese a very large number of pounds was sold for 25 cents and upwards. The Herald says:

"We presume there are more than 300,000 pounds of cheese still back in farmers' hands, being the late ends of dairies, and not sufficiently cured for shipment, which would make the product of cheese in Herkimer county for the past year, at least 17,000,000 of pounds. Little Falls is, and has been for years, one of the largest cheese markets in the United States. All the noted cheese dealers meet here twice a week, and, as competition often runs high, it is regarded a tolerably good guide as to the real feeling in the trade."

Sale of Sheep in Vermont.—What is spoken of as "the largest sale of sheep ever made in Rutland Co.," took place at Brandon, Dec. 12th, and is communicated by a correspondent of the Co. GENT. as follows: N. T. SPRAGUE, JR., of Brandon, sold to MERRILL BINGHAM of West Cornwall, Vt., twelve thorough-bred *Infantadoes,* (Spanish Merinos,) all yearlings, as follows:

10 yearling ewes at $300 each,	$3,000
1 yearling buck,	1,300
1 yearling buck,	2,500
	$6,800

"The purchaser of these sheep is widely known as a breeder and dealer in thorough-bred sheep, and well acquainted with their value, and the sale shows that Mr. Sprague has been very successful in his judicious selections and breeding. Rutland county thus furnishes to Addison county a yearling ram, (the last above named,) that can hardly be exceeded. He sheared last spring at the rate of one pound of wool to less than four pounds of carcass."

White Willow for Hedges.—I notice an inquiry from a subscriber in the Co. GENT. of the 15th Dec., in regard to the white willow for hedge purposes. In the winter of 1862-3, an agent for a "Chicago man," took a great many orders for the cuttings in this county, at the rate of $40 per mile—5,280 cuttings per mile. They were delivered in the spring of 1863. A considerable number of those ordering, however, refusing to take them on account of reports of the worthlessness of the white willow for hedges, and palpable misrepresentation of the agent. The majority took the cuttings, and many miles were planted; and of the miles planted in this region, I think there are not ten rods, or one rod, of good hedge, or even a decent show of growth for screen

or protection for which it was recommended as well. *Salix alba* is pretty effectually "played out," and would find it hard to get a recommend about here. W. P. H.
Vermilion Co., Ill.

Inquiries and Answers.

Shares' Harrow.—In the Co. GENT., Oct. 6, you speak of Shares' harrow with STEEL teeth. In near thirty-six years' farming, with all kinds of harrows, I have never used one that gave so good satisfaction as this—while for putting in small grain, it is only excelled by the drill; but I have never been able to get one with STEEL teeth. Those I have used and seen, had cast teeth, which became dull with use—and if not otherwise objectionable, could not be used on our prairie soil. Can you tell where those with *steel* teeth can be had, and the price? R. H. W. *Ottumwa, Iowa.* [We know of no manufacturer who has made steel teeth for Shares' harrow, although they are very much needed. The objection is their cost—but they would undoubtedly be much cheaper than cast iron in the long run, as the latter become quickly dull, and rendered comparatively useless.]

Obstruction of Tile Drains.—I have taken up two or three rods of my tile, and found it filled with fine grass roots, entirely stopping the flow of water. The tile is laid in sandy soil, from eighteen inches to two and a half feet deep, covered with straw. I wish to know how I can prevent the roots from getting into the tile. Are the roots an out-growth from the straw or the soil? Would not some other covering, such as crushed sorghum cane, be preferable to straw, and perhaps prevent the roots from getting into the tiles? The tile have been laid only two years. DAMOS. *Huron Co., Ohio.* [We see no advantages in using sorghum over cornstalks. A better way would be to lay the tile deeper—they should never be less than two and a half feet from the surface—three feet would be better. If the want of descent will not admit this depth, the tile in those shallow spots may be encased in water-lime mortar.]

Corn Shellers.—Living as I do, in the midst of a pretty extensive corn-growing country, in common with many others, I wish to obtain information as to the *best* hand power corn sheller in use. A *good* hand sheller is an implement much needed among farmers. Such a machine would meet with a ready sale in this section, if it could be found. What I regard as desirable qualities in such a machine are—1st. Rapidity of shelling—2d. Ease of execution—3d. Shelling *clean*—4th. Separating the cobs from the corn, depositing the cobs in one basket and the corn in another. Do you know of any machine superior to the old Clinton sheller? and if so, where is it to be found, and what is the cost? How much corn will it shell per hour? Can it be turned by a man without taking his breath away? Should manufacturers see this, I shall be glad to hear from them at my address. JOHN F. OVENSHIRE. *Waverly, Tioga Co., N. Y.* [We do not know of a better hand-sheller than the Clinton, although there are some others that we think quite as good. It needs careful experiment for a season or two, with the different kinds to enable one to say positively which is best. But we cannot strongly recommend any hand-sheller, unless it be to furnish an occasional grist for family use, a feeding for chickens, or a small quantity for planting. Now that labor is so high priced, and so many farmers are furnished with horse-powers, a good horse-machine ought to be employed by every farmer, who raises any considerable amount of corn. It hardly pays to consume the valuable time of laborers to shell corn at the rate of ten or fifteen bushels per day, with hard work at that.]

Potatoes.—I gathered this fall some potatoes from my potatoe vines, that grew on the vines from the surface of the ground to the tops of the vines. There are similar cases in the neighborhood. It is an entire novelty here. Is it so elsewhere? I saved some to plant next season. M. W. B. *Wash. Co., Md.* [It sometimes happens that certain varieties will produce tubers above ground, which tendency is increased by wet seasons. They are curiosities only—and serve to show that the tuber is not really a root, but only an enlargement from the stem, the eyes being strictly buds.]

White Sprout and Monitor Potatoes.—I will say for the benefit of those wishing information concerning the White Sprout and Monitor potatoes, that they are extensively cultivated in this vicinity. The WhiteS prout was introduced here four or five years ago, and is much esteemed as a very early potato, of good shape and large yield, but the quality is not quite equal to the Buckeye, to which it has to give place, as the latter is introduced to market. What is known as the Monitor potato, with us, is a large, round, deep-eyed potato, white, but somewhat rough skin. Its season is short, and it might be called medium early, ripening, I should think, with the Buckeye. Its yield is very large, but few small potatoes, and quality good. It is fast gaining favor. W. W. G. *Woodbury, N. J.*

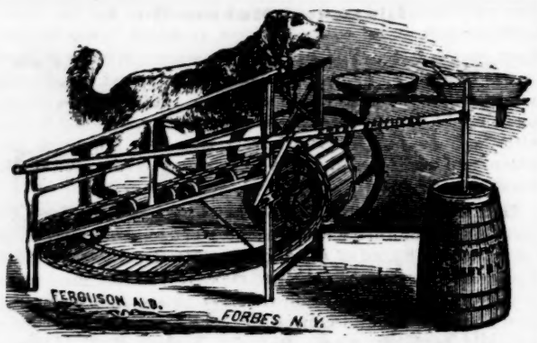
Muck and Leather for Manure.—Will the Co. GENT. please inform me what vegetable and mineral ingredients I must add to a cord of dried black alluvial soil, taken from fresh water meadows, in order to make it resemble most nearly a cord of barn-yard manure? Also please inform me the most simple method of converting leather scraps from a shoe manufactory, into manure. S. E. J. *Yonkers, N. Y.* [Alluvium varies greatly in its composition with the nature of the soil that has been washed down to form it—and its value or fitness depends much on the nature of the soil to which it is applied; but if it contains a fair share of clay, it will always when dry, form an excellent constituent part of compost heaps, mixed with common manure. If there is much clay in it, one third alluvium and two-thirds manure will be a good proportion. If containing less clay, they should be about half and half. Leather, by tanning, is rendered nearly insoluble, as every one is aware who has worn a good pair of cow-hide boots; hence leather remains in the soil a long time—several years—before it is reduced. If cut into fine shavings and scattered over and plowed or harrowed into the soil, it will have a good effect. If mixed with fresh or caustic wood ashes, or still better, with caustic potash, the reduction will be more rapid, and the compound may then be made to form a part of compost heaps.]

Sawdust in Compost.—I notice in the Co. GENT. you object to saw dust in compost—for instance in preparation for grapevines. Will you please answer in the Co. GENT. what is the objection to the use of saw dust? D. L. W. *Fort Wayne, Ind.* [We suppose some of our correspondents may have made the objection, but cannot now refer to it. The sawdust of most kinds of wood, if thoroughly dried, will form a good absorbent for mixing with manure, and retaining its liquid parts, but if quite wet or green, it will be of little use.]

Corn after Buckwheat.—I have a large piece of flat that was cropped with buckwheat last year, which I wish to plant to corn, but am told by corn-raisers that corn will not grow after buckwheat. If you will give your opinion in the Co. GENT. soon, you will much oblige D. McM. *Delhi, N. Y.* [The opinion is very generally entertained, and we think experience has proved, that corn will not do well after buckwheat.]

Michigan White Sprout Potato.—I would remark in answer to inquiry of correspondent in regard to Michigan White Sprout potatoes, that they are a well known variety with us in Camden County, N. J., and I presume in all the low counties of this State, and are considered by many the very best early potato we have, being ready to market, under favorable circumstances, about the 1st of July—of a good yield, and handsome appearance. The seed is very scarce this season, owing to the high prices of last summer tempting many to sell all they raised. S. G. COLLINS. *Haddonfield, N. J.*

The White Willow.—I see an inquiry in a recent No. of the Co. GENT. as to the utility of the white willow for hedge. I will just say I believe it to be a great humbug. Two years ago this winter an agent from Illinois canvassed this part of the country pretty thoroughly. He had splendid photographs of living hedges in Illinois, and carried with him a veritable white willow cane, one year's growth—also a slice of the end of a five year's growth about six inches in diameter. He would sell cuttings for 40 rod fences for $5, to be sent just in the right time to grow first-rate, with printed directions for cultivating. Well, we were going to have all our prairies fenced, for almost nothing, in about three years. I ordered cuttings for 40 rods to begin with. About the 1st of April the cuttings came, with a notice that at a certain day the agent would be at the railroad depot, with the "white willow cuttings," and those who did not meet him there, at that day, to pay for and receive them would find their orders with a justice for collection. I, with very many others, went and received our white willows and printed directions. I followed the directions carefully, and not one in five rods ever sprouted, and what did sprout are now all dead, and I have not heard of one of a great number who took them who did much better. The people are all silent on the white willow—all feeling we are most effectually *sold*. G. H. STEWART. *Beaver Dam, Wis.*



Dog-Power.—Will you, or some of your correspondents, please inform me through THE CULTIVATOR, what kind of dog-power is most suitable for churning where there are only four or five cows kept and a medium sized dog. J. L. S. *Esopus, N. Y.* [We know of nothing better than the common one, shown in the above cut, which can be had at most agricultural warehouses.]

An Orchard Pasture.—I have a sheep pasture of clay loam soil. I wish to plow and drain it, set it out to an orchard, and repasture it to sheep. How would an orchard succeed on such soil? Would a mulch of muck two inches deep, direct from a meadow, be a benefit? Would witch grass seed in seeding it for an orchard-pasture, be an injury in any way? In fact, would it not serve to lighten the soil, and also to afford more feed, by not running out as soon as other kinds of grass? F. MANTER. *Wayne, Me.* [If the soil mentioned will raise good crops of corn after draining, it will do for planting an orchard. It should not, however, be converted to a sheep pasture until several years, or before the trees have attained good bearing size. When the trees are young, the soil should be kept mellow and well cultivated, and be neither occupied with grass nor sown grain crops. The witch or quack grass will be of no benefit—the roots do not extend down far enough to be of much use in loosening the soil for the trees. Clover is the only crop that loosens a heavy soil perfectly, but it is especially detrimental to the growth of fruit trees, and should not be sown in young orchards. The mulching of muck may be useful, but no other mulching can be better than that of a well pulverized surface, kept mellow by constant cultivation.]

Tobacco.—A lady who takes great interest in reading THE CULTIVATOR, and whose husband is now a soldier, wishes me to make the inquiry for her, if any of your correspondents or subscribers have ever tried the experiment of plowing in buckwheat as a manure for a tobacco crop—and if so, she desires them to give the result of that experience. She is inclined to think favorably of it, and proposes to try it next spring, but wishes to get the views or experiences of those who may have tried it, if any have, and also what kind of soil they tried it upon. J. C. A. *Butler Co., Iowa.*

Fruits for Central Vermont.—In answer to inquiries of a correspondent at Williamstown, Vt., we may inform him that it is doubtful if the dwarf pear would succeed well where such rigorous winters exist—although on some soils successful. The experiment should be quite limited until the point is tested. Dwarf apples are quite hardy, but are only adapted to garden culture, not to main crops. Standard pears of the three following varieties will no doubt prove hardy there, viz.: Flemish Beauty, Buffum, and Urbaniste. A fresh soil, if quite fertile, is excellent for an orchard, but if rather sterile, an old garden would be better.

Attempted Imposition, Wine Plant, &c.—An Indiana correspondent states that he was recently called on by a tree agent, who appeared to possess an unusual amount of honesty and candor, who stated that his peach trees were all grown on plum stocks, thus excluding the worm and always securing a crop, the time of blooming being two weeks later on the plum, or beyond spring frosts. He also asserted that the curculio never touched the fruit of his plum trees, because they were grown on the Doucaine stock. Our correspondent wishes our views before he purchases of said agent. Peach trees are often worked on plum stocks at the surface of the earth, but do do not exclude the peach worm. We have seen where this insect had entered the bark three feet from the ground, just above the place of union on the plum stock. Worked high above the ground, such trees are apt to break off, and they are mostly short-lived at best. The blossoming is not retarded a single day, nor is the tree made essentially hardier. There is no wine plant, sold as such, except the common pie plant. The Doucaine is the apple stock used for the larger kinds of *dwarf* apples, and of course the plum could never be worked upon it. The agent referred to was probably very ignorant or dishonest, but more probably both.]

Smoke-House.—Can any of your readers give me a plan for a good smoke-house? I have tried two or three kinds, and as yet have found none that is the right thing. LINCOLN. [We have seen an excellent smoke-house made as follows: It was about six feet square, the lower half built of brick, furnished with an iron-lined door, and serving as an ash-house, and place for the fire. The upper part, about four feet high besides the ascent of the roof, was made of wood. It was separated from the lower part by scantling joists, a space of two or three inches between them, through which smoke and air could freely pass, but sufficient to catch any ham that might accidentally fall, and thus save it from the fire. The upper part as well as the lower, was entered by a door from the outside; this upper door may be kept locked, except when admitting or withdrawing hams; but the lower may be left unlocked, for the hired man to build fires, without any danger of the contents above being stolen, as the thief cannot pass through the openings between the joists.]

Calves.—Can they be reared without milk or whey—say take them at four days old? J. B. F. [Calves may be weaned early, or within a few days, without difficulty, but milk should be gradually discontinued, so as not to produce sudden changes in food, which may prove fatal. First give new milk, gradually adding to it increased portions of skimmed or warm milk. Then add first a very small quantity of barley or other meal, increasing this very gradually, until it becomes a sort of gruel, water being added by a similar increase. In this way the food of the young animal may be gradually changed from milk to gruel, and from gruel to common wet messes. Flax seed tea, when to be had, answers well for the purpose of effecting the change from milk to meal.]

Feeding Dry and Scalded Bran.—Will you give me some information as to how is the best method to feed buckwheat bran to cows? I have been in the habit of having all my buckwheat floured, and feeding the bran. I have always fed it dry, but I find the general opinion of my neighbors is that it must be scalded in order to receive the most benefit. Where a man feeds a ton or ton and a half, it is quite an item how he feeds it, more especially this season when good hay is so scarce. My opinion has always been that to scald the bran, will, when fed to cows giving milk, cause them to give a larger quantity of milk, but will it keep them in as good condition? I have always thought that to feed it dry would keep them in better condition, leaving the quantity of milk out of the question, as the old saying is that it would stick to the rib more when fed dry than when made into slop. Another thing I notice: I do not hear any of my neighbors when fattening cattle, no matter what kind of meal or bran they feed them, talk of feeding otherwise than dry. A. C. DICKSON. *Rotterdam, N. Y.* [It is a common opinion that all ground food is better for cattle by being scalded or cooked; but unfortunately a sufficient number of experiments carefully and accurately made have not been reported, showing the exact amount of benefit derived. While scalding food for swine has been amply proved as eminently profitable, it is a common belief that it does not *pay* in feeding cattle. We should be glad to hear from any of our readers who have accurately experimented on the subject.]

Clover with Oats.—Will you be kind enough to let me know if, by sowing clover and oats upon soil well tilled, can I receive a fair crop of either or both? SUBSCRIBER. *White Plains, N. Y.* [A good crop of clover has sometimes resulted from sowing with oats, but it cannot be relied on. With a moderate or thin crop of barley or spring wheat, on the other hand, it is nearly always sure to succeed, provided the sowing is done quite early.]

Gas-Lime.—I have lately purchased a tract of land, almost entirely worn out, and design putting it down to clover in the spring, and as I am short of manure, I want to know if gas-lime will be of any benefit to the land. I am very near gas works, where any quantity can be had for the hauling. Will it increase the crop of corn, oats, or barley? W. D. S. *Joliet, Ill.* [Gas-lime varies in composition and corrosiveness—it is useful on most soils in connection with manure, but would

probably be of little use on a sterile soil, applied unmixed, unless such a soil happened to be particularly deficient in it—this can only be learned by trying the experiment. Gas-lime does well spread thinly and evenly on grass lands, but is probably best used when employed as a component part of compost heaps.]

Food for Milch Cows.—What is the cheapest feed for cows where butter is the object—I mean to consider the greatest return for the least money, and the future profit of the cows? Is it best to cook beets, carrots and parsnips, when fed to cows? I would like to see some pieces on the above questions in particular. J. P. G. *Hardin Co., Ky.* [Cornstalks sown thickly for fodder, harvested, well cured, and kept from fermenting, are probably the cheapest kind of *fodder* that can be raised for cattle—unless sorghum raised for this purpose should prove by experience to be better. In addition to this, give each animal daily, a peck to a half bushel of carrots, or an equal amount of sugar beets, the winter through. It does not pay to cook them. A small quantity of corn or bean meal, or both, in addition to this, will have a good effect, but not more than two quarts should be given daily, at the utmost.]

Pump for Deep Wells.—Can you inform me whether there is a pump in existence which will raise water out of a well 90 feet deep, that is easy for a woman to use, and where it can be had? B. K. A. *Providence, Pa.* [We have known a forcing pump placed in a very deep well and worked through a gas-pipe, to answer a similar purpose well for several years. It was made by Downs & Co., Seneca Falls, N. Y., Our correspondent is also referred to the notice of a forcing pump made by J. D. West & Co., 179 Broadway, N. Y., published in the Co. GENT. of Oct. 20, page 256.]

Ditching Plow.—I wish to know if you can inform me where the adjustable ditching plow, described in vol. 2 of RURAL AFFAIRS, p. 296 and 297, figures 147 and 148, can be bought. From the description given, I think it would be of great advantage in draining. C. M. *Mercer Co., Pa.* [M. Alden, of Auburn, N. Y., and McFarlan Bros. of Union Springs, N. Y., who manufacture these plows, can furnish any desired information. They are also, probably, furnished by Paschall Morris, of Philadelphia.]

Sugar-Making—Italian Bees—Drill.—1. Where can I get a good treatise on maple sugar making?—2. Are the Italian bees more profitable than the common bees?—3. Which do you consider the best drill for wheat? H. J. C. *Holland, Mich.* [1. Our correspondent will find a good treatise on sugar making, with illustrations, in the 3d vol. of Rural Affairs, beginning at page 241.—2. Italian bees are much hardier and more efficient and industrious than common bees, and are consequently more profitable; but they need cautious handling, as they sting furiously, although introduced by some as the "stingless bee."—3. The best wheat drill with which we are well acquainted, is Bickford & Huffman's, made at Macedon, N. Y.]

Corn after Buckwheat.—D. McM. asks — Will corn do well after buckwheat?" Editor says, "We think experience has proved that corn will not do well after buckwheat." Some little experience in the cultivation of both these grains, and in the relation proposed, compels the rejection of the above theory supposed to be founded on experience, and I think we should look to other causes, if corn is a failure after buckwheat rather than in anything particularly obnoxious in the latter to the former grain. Does not observation prove that the poorer or less fertile portions of the farm are generally selected for buckwheat. And is not the *real antagonism* found *in the lack of fertility.* It is inferred that D. McM. is in process of permanently improving his "flat," and as a subduing crop, has used buckwheat, and if so, he may plant to corn upon condition precedent that his soil is *dry and fat*, not asking whether it has been poisoned by buckwheat. At any rate this is my

EXPERIENCE.

White Sprout Potatoes.—In answer to the inquiry of A. B., in the Co. GENT. of Jan. 12, I may say that there is a potato grown under that name in this part of the country. I have been acquainted with it for 8 or 10 years, and so far as I know, it is a general favorite, possessing in a good degree the requisite qualities for an early market potato—earliness, large size, productiveness and good quality. It is generally nearly round and smooth, white, and when cooked, dry and mealy. The price of early potatoes was so high last summer (from $2 to $3 per bushel,) that I think there are few if any of this variety now for sale here. E. Y. T. *Richmond, Ind., Jan.* 18.

Illustrated Rubus—No. 4.

Illustrated Rubus—No. 5.

Illustrated Rebus—No. 6.

ANSWERS TO ILLUSTRATED REBUS.—No. 1. "Labor overcomes in all undertakings."—No. 2. "Let honesty be your rule and dishonesty and all underhand acts be put under foot."—No. 3. "The honest farmer fears not the penitentiary, nor is overtaken by intemperance."

The Agriculture of Ohio.—In the Ohio Agricultural Report for 1863, the opening chapter by Mr. Secretary KLIPPART, reviews in an appropriate and suggestive manner, the condition of Farming in that State, bringing forward several interesting and important points, to only one of which we can at present briefly advert.

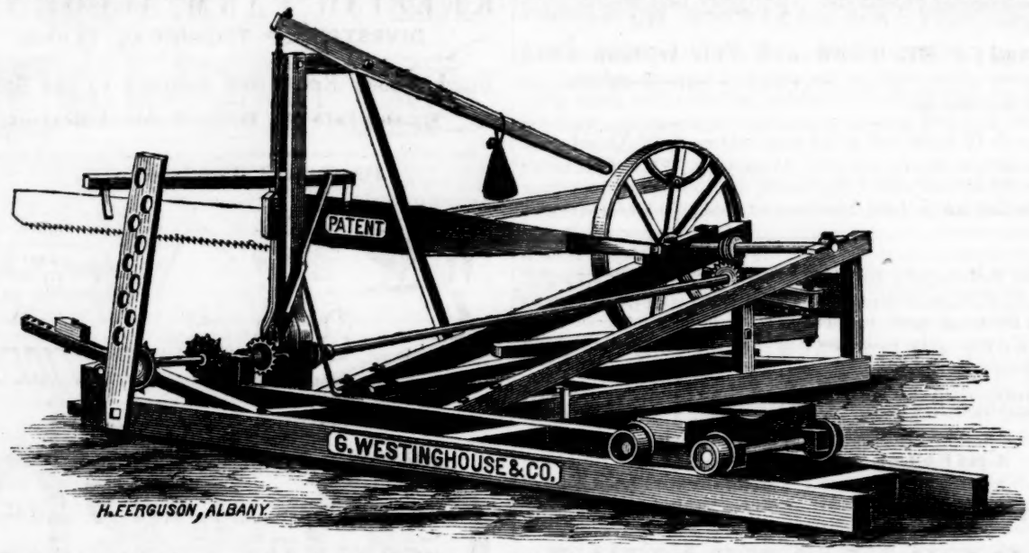
The fact that the Assessors of Ohio annually report the extent and amount of the crops produced, enables us to judge quite accurately, (notwithstanding the discredit attempted to be thrown upon these returns in a recent Bulletin of the Agricultural Department at Washington,) of the effect of the war upon our agriculture in a district of great agricultural importance. A table presented by Mr. Klippart enables us to compute following averages:

Kind of crop.	Average number of acres cultivated in each of the three years preceding the war—1858-59-60.	Average number of acres cultivated in each of the three years during the war—1861-1862, 1863.
Wheat,	1,776,905	1,943,680
Rye,	94,379	56,373
Barley,	100,013	64,478
Buckwheat,	95,918	33,963
Indian Corn,	2,190,327	2,144,556
Oats,	714,735	625,352
Meadow and clover,	1,412,334	1,538,079
Totals,	6,384,611	6,406,481

If some of the crops above enumerated show a decrease, it must be remembered that others, not here included, requiring more labor in proportion to area, such as flax, tobacco and sorghum, have been considerably enlarged, while the aggregate of the foregoing figures actually shows a slight advance in the latter column as compared with the former. With the very large number of men which Ohio has sent to the war, such a result we confess is beyond any anticipations which could have been formed when the war began, and contrasts most forcibly with the foreign predictions of its effect upon our farming.

G. WESTINGHOUSE & CO.,

IMPROVED CROSS-CUT SAWING MACHINE.



The attention of wood-sawyers is invited to the above machine. It is intended for doing the heaviest business, and may be driven by either Endless Chain or Lever Horse-Powers. Improvements in it over the machines in common use, consist of—1st. The saw always moves in a direct line with the centre of the crank-wheel, which enables it to be driven rapidly without bounding. 2d. The apparatus for rolling the log forward is operated by a screw on the crank-wheel shaft, avoiding the use of ropes, chains, or belts. 3d. The log-roller is adjustable to suit the size of log; and, 4th. The saw may be balanced so as to cut light or heavy, according to size of log.

Send for a Circular containing description of above machine; also of our Patent Endless Chain and Lever Horse-Powers, Threshers and Cleaners, Clover Machines, Circular Sawing Machines, Broom Corn Scrapers, &c. Address

G. WESTINGHOUSE & CO.,
Schenectady, N. Y.

Feb. 16—w&m1t.

THE BEST AND CHEAPEST
Farming Lands in the Whole West

Are those of NORTHERN MISSOURI. Rebels are moving away, and are selling for whatever they can get. An extensive immigration from the Northern States, and from Europe already begun, will soon occupy that part of the State and develop its immense natural wealth. Free and full information given on application to

ELI THAYER,
1 Park Place, New-York.

Jan. 19—w&m3mos.

VINELAND LANDS.
To all Wanting Farms.

Large and thriving settlement, mild and healthful climate, 30 miles south of Philadelphia by railroad. Rich soil, which produces large crops, and which can now be seen growing. Ten, twenty and fifty acre tracts at from $25 to $35 per acre, payable within 4 years. Good business openings for manufactories and others; churches, schools, and good society. It is now the most improving place East or West. Hundreds are settling and building. The beauty with which the place is laid out is unsurpassed. Letters answered. Papers containing reports and giving full information will be sent free. Address

CHARLES K. LANDIS,
Vineland Post-Office, Cumberland Co., N. J.

[From Report of Solon Robinson, Ag. Editor of the Tribune.]

It is one of the most extensive fertile tracts, in an almost level position, and suitable condition for pleasant farming that we know of this side of the western prairies. Dec. 22—w&m3mo.

NEW-YORK STATE TILE WORKS,
NEAR THE CORNER OF
LARK & LYDIUS-STREETS, ALBANY, N. Y.

WM. M. BENDER, Proprietor. | **GEORGE JACKSON Superintendent.**

The subscriber is prepared to furnish Round, Sole and Horse-Shoe Tile, over 13 inches in length, by the cargo, or in the smallest quantity on demand, at prices that he will defy any other parties to undersell him. He will warrant his tile hard burnt, and to fit close at the joints, and altogether superior to any made in the United States.

All tile delivered on board of cars and boats in this city free of charge. Price list sent on application.

Also DRAINING TILE MACHINES for sale of the latest improved patterns. For further particulars address as above. Ap7.—w&m.

TOBACCO SEED.—The true CONNECTICUT SEED LEAF, of my own growing.

25 cts. per Packet: 50 cts. per Ounce: $4 per Pound.

Also the EARLY ORONOCO, at the same prices. Will be

SENT POSTPAID.

Feb. 23—w6tm1t. D. S. HEFFRON, Utica, N. Y.

SCROFULA, CONSUMPTION, CATARRH. &c.—WM. R. PRINCE, Flushing, N. Y., offers "*Treatise on Nature's Sovereign Remedials for Diseases*," extracted from Plants, comprising 85 Specific Medicines, which cure the above, and Liver, Kidneys, Throat, Eruptive, Nervous, Rheumatic, Seminal, Urinary, and Female Maladies, Cancer, Spermatorrhœa, Dyspepsia, Dropsy, Diabetis, Bronchitis, Tumors, Asthma, Salt Rheum, Erysipelas, and other skin diseases, White Swelling, Head Discharges, Piles, Diarrhea, stomach Affections, Typhoid, and Bilious Fevers, Small Pox, Spinal Affections, Mercurial Diseases, and other impurities of the blood.

Feb. 9—w&m1t.

BOARDMAN & GRAY'S
PATENT IMPROVED
INSULATED IRON RIM AND FRAME

PIANO FORTES.

MANUFACTURED BY
WILLIAM McCAMMON,
(Successor to BOARDMAN, GRAY & CO.,)
Albany, N. Y.

☞ Send for Illustrated Price List. Jan. 1—mtf.

BRUCE'S PATENT

Concentrated Manure

is no longer an experiment. Three years' trial has proved its SUPERIORITY over all other MANURES. It is composed of

Animal Fibre, Blood and Pure Ground Bone.

It is not because of these VALUABLE INGREDIENTS alone that we claim its

Great Fertilizing Power

It is also in the *Patent process through which it passes* in its manufacture, by which we are enabled to

CONCENTRATE THE NECESSARY FOOD FOR VEGETATION.

CAUTION.

There is a new fertilizer in market called by a similar name, the agents of which have taken from *our Circular of* 1864, testimonials in regard to BRUCE'S CONCENTRATED MANURE, and *are using them to sell their article.*

ORDER DIRECT FROM US OR OUR AGENTS, and see that the barrels are branded

BRUCE'S PATENT CONCENTRATED MANURE.

C. W. VAN DOREN & CO.,

GRIFFING BROTHER & CO.,

58 & 60 *Cortlandt-Street, New-York.*

Jan. 26—w13tm3t.

"RURAL AFFAIRS."

THREE VOLUMES.

Over Thirteen Hundred Engravings.

One Thousand Pages of Reading Matter.

Some of the subjects treated in the three Volumes entitled "RURAL AFFAIRS," (price $1.50 each, by mail, postpaid, or $4.50 for the set) are comprised in the following partial abstract of their contents:

1. **Country Dwellings.**—FIFTEEN DESIGNS in Vol. One; TWENTY-SEVEN DESIGNS, and a full outline of "a Complete Country Residence" in Vol. Two; SIX DESIGNS of Working Men's Cottages in Vol. Three, also complete directions for building One, Two and Three Story Buildings on the "Balloon" system, and an Illustrated Glossary of Architectural Terms.

*** In this Department, RURAL AFFAIRS is one of the most valuable works published, including nearly 250 illustrations, with estimates of cost, Rules for Planning and Building, etc., etc.

2. **Laying Out Grounds.**—Articles on Laying Out Farms, on Pleasure Grounds and Gardens, and on Modes of Planting, in Vol. One; on Ornamental Planting, with Nine more Plans, in Vol. Two; on Garden and Green-House Arrangements in Vol. Three. Largely illustrated, with much practical information.

3. **Farm Buildings.**—Plans and Descriptions of Barns, Carriage Houses, Piggeries, Poultry Houses, Smoke Houses, &c., in Vol. One; EIGHT DESIGNS of Barns in Vol. Two; FOUR in Vol. Three—about 130 engravings in this department, which every Farmer might consult to advantage.

4. **Practical Agriculture.**—Among many valuable articles in all the Volumes, Mr. THOMAS' Illustrated Prize Essay on FARM MANAGEMENT; the chapter on UNDERDRAINING; the Essays on GRASSES, and the WEEDS, &c., are complete treatises, in small compass, on the subjects to which they are devoted.

5. **Fruits and Fruit Culture.**—Few works on Horticulture contain a similar amount and variety; nearly 250 varieties concisely described in Vol. One, with twenty-two shorter articles; a large number of articles, some of considerable length, in the other Volumes, with innumerable shorter notes derived from the Author's long and successful experience. This department includes over 250 Engravings.

6. **Domestic Animals.**—The Principal Breeds; Doctoring Sick Animals; General Management at all Seasons. Also the POULTRY YARD, including a full treatise by C. N. BEMENT, and the APIARY, including the care of Bees. Largely Illustrated.

7. **Flower and Vegetable Gardens.**—Laying Out and Management; Green-House and other structures; Rustic Work of all kinds; New and Desirable Plants, &c., &c.—also HEDGING and HEDGES.

8. **Farm Implements, etc.**—Twenty-three articles in Vol. One and many others in Vols. Two and Three—also a complete chapter on FARM FENCES and GATES—on CISTERN BUILDING, Construction of LIGHTNING RODS, etc.

9. **Butter and Cheese Making.**—Several articles, with Designs of Dairy Houses, and practical directions in detail, including the experience of many of our best Dairy Farmers.

10 **Rural and Domestic Economy.**—Under this general head may be classed a variety of subjects of out-door or in-door interest to every resident in the country, far too numerous to specify at length.

The foregoing reference to some of the most important subjects treated in these Volumes, does not include a large number of very important and admirable chapters—such as that on INSECTS INJURIOUS TO THE FARMER, by Dr. FITCH, with 34 Engravings, and that on the GROWTH OF PLANTS and Vegetable Physiology, with 61 Engravings.

The volumes are sold either separately or together at the price above named. As Premiums by Agricultural and Horticultural Societies they are excelled by no books now before the public; and Agents will find them command a ready sale. A liberal discount will be given where any quantity is purchased. Address the publishers,

LUTHER TUCKER & SON.
COUNTRY GENTLEMAN OFFICE, Albany, N. Y.

FARM BOOK-KEEPING.

A Concise and Scientific Method of

KEEPING FARM ACCOUNTS,

DIVESTED OF TECHNICAL TERMS,

AND ACCOMPANIED WITH

Blank Books Ruled and Adapted to the System.

By the late W. D. Cochran of Detroit.

The publishers of the COUNTRY GENTLEMAN have secured an edition of this excellent work on Farm Book-Keeping, which they feel warranted in recommending in the highest terms to the attention of the Agricultural public. It was first published five or six years ago, but owing to the author's death, has not of late been in the market. It is now proposed to have at all times a stock of the Manual and accompanying Blank Books in hand, so that those who once begin the keeping of their accounts upon this system may always have the means of obtaining the books properly ruled for the purpose.

The set—consisting of the MANUAL, the LEDGER and the DAY BOOK—the two latter affording sufficient room for a full year's accounts, unless upon a scale of unusual extent—will be sent by mail, postpaid, for $3. The LEDGER and DAY BOOK will be sold at $1.25 each, and the MANUAL alone, to those desiring to examine the system, for 75 cents.

The DAY BOOK and LEDGER may also be had of extra large size, at $2 each, ($4 for both books, or $4.50, together with the Manual,) by mail postpaid.

These prices are really lower than the present cost of manufacturing the books would warrant, but we put them as cheaply as possible in the hope that a larger number may be induced to make a trial of the system therein explained. Address

LUTHER TUCKER & SON,
Country Gentleman Office, Albany, N. Y.

[*From the Executive Committee of the Agricultural Society of the State of Michigan.*]

Resolved, That this committee recommend to the public the work of D. W. Cochran of Detroit, entitled "Agricultural Book-Keeping; being a concise and scientific System of Keeping Farm Accounts," together with the blank books and tables accompanying the same, as works of practical utility to the farmers of the country.

J. E. EMMONS, Sec'y.

[*From the Executive Committee of the Agricultural Society of the State of New-York.*]

Resolved, That in the opinion of the Board, the system of accounts submitted by Mr. Cochran, in its general principles, is a valuable one, and may be usefully introduced among the farmers of our State.

B. P. JOHNSON, Cor. Sec'y.

GREGORY'S SEED CATALOGUE.—My CATALOGUE OF GARDEN SEED, embracing over 200 varieties, (a large portion of which are of my own raising,) containing some new and rare vegetables not to be found in any other catalogue, is now ready for distribution. Sent free to all applicants. Those who purchased seed of me last season will receive it without writing for it. As the original introducer of the Hubbard Squash, Marblehead Mammoth Cabbage, and many other new vegetables, I invite the patronage of the public.

JAMES J. H. GREGORY.
Feb. 16—w4t. Marblehead, Mass.

WM. THORBURN'S ANNUAL CATALOGUE

OF

GARDEN, FIELD & FLOWER SEEDS FOR 1865

now ready. Will be mailed to applicants.

WM. THORBURN, Seedsman,
Feb. 16—w2t. 490 & 492 Broadway, Albany, N. Y.

DWARF APPLES—On Paradise Stock, 3 and 4 years old, well-branched and thrifty; a fine assortment of varieties; prices low by the quantity. Also a few hundreds *Peaches* on Plum Stocks, 2 years old, with fruit buds.

HOOPES & BRO.,
Feb. 16—w4t. Cherry Hill Nurseries, West Chester, Pa.

50,000 VINES FOR SALE.

Underhill Seedling.

The BEST HARDY NATIVE GRAPE yet introduced. Ripens August 26th. Vines can be shipped by mail or express immediately at the following prices:

No. 1 strong vines, 8 to 10 eyes,	$60.00
No. 1 single vines, each	1.00

All orders, to secure attention, must be accompanied with the cash. Address

C. REAGLES & SON,
Feb. 16—w8t. Schenectady, N. Y.

GOODRICH SEEDLING POTATOES FOR SEED.—The subscriber will fill orders for the PINKEYE RUSTY COAT, CUZCO WHITE and GARNET CHILI varieties of Potato, at FIVE DOLLARS per barrel, on the receipt of the money by mail.

E. C. ALLEN,
Feb. 2—w1f. West Meriden, Conn.

PELHAM NANKINS.—The subscriber having completed his experimenting with the above stock, offers them for sale at reduced prices:

Aged Buck, very fine,	$2.50
Buck Lambs,	3.00
Ewes, full blood,	5.00
Ewes, half blood,	7.50
Lambs, quarter blood,	7.50

Feb. 9—w5t. J. T. WARDER, Springfield, Ohio.

CONTENTS OF THIS NUMBER.

The Farm.

Autumn Surface Manuring, ... 73
Summer Fallowing, by W. J. PETTEE, ... 74
Remedy for the Wire Worm, by JOHN H. CHARNOCK, ... 77
Surface Manuring, by S. W., ... 80
Product of Six Acres, by J. HIGGINS, ... 81
Wasting Manures, by ARTHUR GILMAN, ... 82
Field Culture of Onions, by HENRY PERCEY, ... 83
Farm Book-Keeping, by N. REED, ... 84
Raising Corn for Fodder, by T. HIGGINS, ... 84
Culture of Onions, by J. W., ... 84
Night Soil—Liquids and Solids, by B. F. S., ... 85
Annual Meeting of New-York State Ag. Society, ... 88
Culture and Product of Four Acres of Sorgho, by R. L. SHARP, ... 90
Health of Plants, by SELVA, ... 92
Make the Soil Rich at the Surface, by W. G. W., ... 92
Notes for the Month, ... 96
Inquiries and Answers, ... 99

The Grazier.

Feed Required by Cattle, by JOHN JOHNSTON, ... 78
Ticks on Sheep, by S. GLEASON, ... 78
Rearing Calves on the Soiling Principle, by G. D. CURTISS, 78
An Experiment in Feeding Two Hogs, by F., ... 79
A Good Lot of Pigs, by C. G. CARPENTER, ... 83
The Best Mutton Sheep, by C. E. H., ... 90
Best Way to Rear Calves, by JOHN SHATTUCK, ... 91
Quantity of Hay per Head of Cattle, by W. D., ... 93
Corn Smut Poisonous to Cattle, by T. S. GOLD, ... 93

Horticultural Department.

Fruit Growers' Society of Western New-York, ... 75
Grapes—New Variety, Best for Succession and Soil for, ... 75
Discussion on Pears—Profitableness of Pear Culture, ... 76
Pears for General Cultivation, ... 76
Failure of the Peach Crop, ... 76
Profitableness of Small Fruits, ... 76
Raising Grapevines, by J. M. M., JR., ... 78
Planting Evergreen Trees, by WM. BACON, ... 80
About Grapes, by A. S. Moss, ... 81
Potato Onions, by A. S. Moss and B. C. HOOD, ... 82
Gum Shellac for Wounds on Trees, &c., by E. Y. T., ... 82
Shellac Varnish—Crude Petroleum for all Kinds of Vermin, by A. J. SHELDON, ... 85
Use of Salt for Moles, by J. I. CASTLES, ... 85
Bedding Plants and Annuals, by SCARBROENSIS, ... 94
A Box of Apples, ... 98

Domestic Economy.

How to Cure Hams, by J. H. GARDINER, ... 76
To Make Good Cider, by J. B., ... 76
Ice Cream, Custards, &c., ... 86
Blac Mange—Calf Foot Jelly—Charlotte Russe, ... 87
Coffee, Tea and Chocolate, ... 87
Recipe for Salting Beef, by E. C., ... 95
How to Hang an Axe, by E. C., ... 95

The Dairy.

Ayrshire Cows as Milkers, ... 87
Average Product of 337 Cows, by STORRS BARROWS, ... 93
The Factory System of Cheese-Making, ... 95
Cheese Factory Statistics, ... 96, 98

Poultry-Yard.

Profit and Unprofitableness of Fowls, by JOHN S. IVES, ... 74
The Brahma Fowls, by H. J. L., ... 77
Goose Farming, by D., ... 81

Birds.

The Hawk Owl, ... 94

Bee-Keeper's Department.

Bee-Houses and Bee-Hives, by K. P. KIDDER, ... 86

Illustrations.

The Hawk Owl, ... 94
Flower Bed, ... 94
Dog Power, ... 100
Illustrated Rebus, ... 109
Westinghouse's Cross-Cut Sawing Machine, ... 102

BEST CONNECTICUT SEED LEAF TOBACCO SEED, sent for 25 cents per ounce.
March 2—w2tm1t. J. RISING, Southwick, Mass.

THE GOODRICH
New Seedling Potatoes.

Early Goodrich,	$1.50	per peck.	$5.00	per bushel.
Calico,	1.50	do.	5.00	do.
Gleason,	2.00	do.	8.00	do.

For description see COUNTRY GENTLEMAN of Oct. 27th, 1864. No extra charges. Will be sent as directed as soon as the weather will permit. Supply limited. Orders will be filled in the order received. D. S. HEFFRON, Utica, N. Y.,
Feb. 23—w3tm1t. Agent for Rev. C. E. Goodrich's family.

AGRICULTURAL AND HORTICULTURAL Books for sale at this office.

B. K. BLISS'
SEED CATALOGUE & GUIDE TO THE
FLOWER & KITCHEN GARDEN.
THE ELEVENTH EDITION,
enlarged and improved, just published, containing ONE HUNDRED PAGES closely printed matter, with many
BEAUTIFUL ILLUSTRATIONS,
and a Descriptive List of upwards of
2,000 Varieties of Flower & Vegetable Seeds,
including many CHARMING NOVELTIES, now offered for the first time in this country, with explicit directions for their culture. Also a list of upwards of
One Hundred Varieties French Hybrid Gladiolus,
and other SUMMER FLOWERING BULBS. To which is added a list of a few of the choicest varieties of GRAPES, STRAWBERRIES, RASPBERRIES, and other SMALL FRUITS, BEDDING PLANTS, etc., etc., cultivated at his gardens, with much other useful information upon the subject of Gardening generally, which will be found useful to the experienced amateur, as well as those about to commence the delightful occupation of gardening. In consequence of the very great advance in the cost of paper, printing, &c, we cannot afford it gratuitously (as we have heretofore done) excepting to our regular customers.
A copy will be mailed, postpaid, to all applicants enclosing 25 cents. Address B. K. BLISS,
March 2—w4tm1t. SPRINGFIELD, MASS.

CHICCORY SEED.
The Great Substitute for Coffee.
A supply of the genuine article just received from Germany by the subscriber, and will be sent by mail to any address upon receipt of prices affixed. Packets containing 1 ounce 20 cents; 8 ounces, 80 cents; 1 pound, $1.50. Directions for culture and curing accompany each package. Address B. K. BLISS,
March 2—w4tm1t. Springfield, Mass.

CONNECTICUT SEED LEAF
TOBACCO SEED.
BE SURE AND BUY THE BEST.
A superior lot raised expressly for the subscriber, by one of the most successful cultivators in the valley of the Connecticut.
Packets with full directions for culture, curing, packing, &c., will be mailed to all applicants at the following rates:

1 ounce,	50 cents.
4 ounces,	$1.50
1 pound,	5.00

Address B. K. BLISS,
March 2—w4tm1t. Springfield, Mass.

YOUNG MEN AND MEN OF MIDDLE AGE
WANTED.
By arrangement with gentlemen at Washington, and through agencies established in different cities, I am now prepared to furnish lucrative and honorable situations for every young man or man of middle age, who completes (in a thorough, satisfactory manner) the course of ACTUAL BUSINESS TRAINING at Eastman National Business College, Poughkeepsie, N. Y But a small portion of those who graduate desire the assistance of the College in this matter, and the demand for the spring and summer business is greater than the supply. The great preference exhibited by the business community for those who qualify at this institution, is owing to the fact of their being so thoroughly drilled in ACTUAL BUSINESS OPERATIONS. It is this that has given the College such wide spread reputation and placed it so far in advance of all the Commercial or Business Schools. Reference is given to two hundred graduates now in the Government Departments at Washington, more than four hundred in banks, offices and mercantile establishments in the city of New-York, and to merchants, Bookkeepers, Accountants, Salesmen, Telegraph Operators and Business Men, in the cities and villages of the country, who have been PRACTICALLY educated here. Associations of the graduates have been formed in Boston, Washington, Chicago, Philadelphia, New-York and other cities. The entire expense of the Course, including board, tuition fee and incidentals, is from $80 to $90. Applicants are admitted at any time. Full particulars may be had by addressing
H. G. EASTMAN,
President National Business College,
Feb. 23—w&m1t. Poughkeepsie, N. Y.